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ABSTRACT

This report contains proceedings of a 1978 conference on women's changing roles, based on data collected from a national longitudinal survey (begun in 1967 and still continuing) of 5,000 women aged 30-44. The keynote address was presented by Secretary of Labor Raymond Marshall, who noted the need for research to influence government policy. Papers delivered during the conference focused on four areas: (1) information available from the national longitudinal survey; (2) work and family roles--conflict and resolution, including sex-role attitudes and employment among women, women's employment, income, and family dissolution, and the economic consequences of marital dissolution; (3) how women fare in the labor market; and (4) how sociological research can be used by policymakers in government. A summary of conference proceedings and themes by Isabel V. Sawhill is included. Appendixes contain the conference agenda and a list of conference participants and attendees. (KC)

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Women's Changing Roles at Home and on the Job

Proceedings of a Conference on the National Longitudinal Surveys of Mature Women

In Cooperation with the Employment and
Training Administration
Department of Labor

Special Report No. 26
September 1978

1522 K Street, N.W., Suite 300
Washington, D.C. 20005

U S DEPARTMENT OF HEALTH,
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FOREWORD AND SUMMARY OF KEYNOTE REMARKS

This special report on women's changing roles at home and on the job contains the proceedings of a conference held under the joint sponsorship of the National Commission for Manpower Policy and the Office of Research and Development of the U. S. Department of Labor.

When the National Commission for Manpower Policy issues a report in association with a cosponsor, as in the present instance, a special word of explanation is needed to place the joint project in perspective. Dr. Isabel Sawhill agreed to take the lead in planning and organizing this conference when she was still on the staff of the Urban Institute, prior to her assuming the Directorship of the National Commission for Manpower Policy in September 1977. As part of an orderly transition, it was agreeable to all concerned parties that the grant be shifted from the Urban Institute to the Commission, so that Dr. Sawhill could fulfill her commitment. As Chairman of the Commission, I welcomed this resolution because of the ever more important role of women in the economy, a subject of continuing concern to the Commission, but one to which it has as yet not been able to direct adequate attention and resources. We would like to thank Howard Rosen and the Office of Research and Development, DOL, for their part in making this conference and these proceedings possible.

The surveys that provided this data base on a national sample of 5,000 women, aged 30 to 44, were initiated in 1967, and interviews are continuing. The U. S. Department of Labor assumed the leadership in underwriting this survey, as well as three other longitudinal surveys. The Center for Human Resource Research, Ohio State University, is conducting the study, and the Bureau of the Census is doing the field work. These surveys have provided a wealth of new information on work histories, labor market experiences, education, training, health, work-related attitudes, marital and family status, child care arrangements, occupational status, and earnings.

In planning and coordinating the work of the conference, Dr. Sawhill was assisted by a committee of experts composed of Glen Cain, University of Wisconsin; Barbara Jones, Clark College; Carol Jusenius, Ohio State University; Herbert Parnes, Ohio State University; Linda Waite, University of Illinois; and Harold Watts, Columbia University. Ellen Sehgal served as an ex officio member of the Committee, representing the Department of Labor. Critical staff support was provided by Laura von Behren at the Commission.

The conference, held at the Department of Labor on January 26, 1978, focused attention on the NLS data in the hope and expectation that researchers would be encouraged to mine it, particularly for policy-relevant guidance; it was also hoped that they would come into direct contact with government officials who could help them see more clearly the directions of public policy and the research priorities these directions suggest.

In my introduction of the Secretary of Labor, I called attention to the fact that Dr. Marshall was uniquely qualified to open the conference because of his outstanding contributions to research in the human resources arena--particularly his work on the role of groups with labor market handicaps--also because of his present position as the senior policy adviser to the President on employment and training issues.

Secretary Marshall, in his introduction, stressed five themes:

° The difficulty of combining research and policymaking and the importance of research, particularly in helping to isolate long-range problems. The conventional decision-making process in the political arena tends to concentrate on short-range issues and seeks to avoid new problems. Yet many new and important problems, such as the consequences of emerging demographic trends, do not fit well into existing agendas. Research can call attention to these new developments as well as seek to quantify the size and nature of the problems (for example, the growing numbers of employed black teenagers and of undocumented workers). Research can also contribute to the setting of priorities and can provide information on the feasibility of initiating new programs. Finally, researchers have a role to play in illuminating the underlying causes of social problems and in evaluating the performance of ongoing programs.

- The need for policymakers and researchers to understand each other better. Of the two, the research community is generally the less knowledgeable about the way in which political change occurs. Most policymakers have been exposed to research, but few researchers understand the policy process. The political process is very complex. The media can often be instrumental in facilitating social change, and scholars can exert more influence on the outcomes by disseminating their research to the media.

- The difficulty and the necessity of simplifying complex issues. Decision makers operate under time pressures and must rely heavily on their staffs to distill relevant information for them. Summaries of the issues must be carefully crafted. Appropriate symbols and language are necessary.

- The usefulness of theory and its relationship to the real world. It is difficult to make use of many theories because they are often so abstract. To have impact, theory must be seasoned by facts. Researchers often err not only by failing to note the limitations of various approaches, but also by overqualifying their results, which will vitiate their having much impact.

- The importance of more multidimensional and interdisciplinary research. Research that is narrowly focused is likely to have little or no value to the policymaker, since the political process must be responsive to all of the forces that can affect the outcome.

The foregoing does not do justice to the richness and insightfulness of Secretary Marshall's opening comments, but his several propositions underscore his conviction that many gains could accrue from a closer working relationship between researchers and policymakers.

The concise summary of the Conference Proceedings that Dr. Sawhill has prepared for this publication makes it unnecessary for me to set out my understanding of what was said and the policy implications thereof. Let me therefore simply call attention to a very few points inherent in recent trends in female labor market participation that are, and that will continue to be, of great importance for the ongoing work of the Commission:

- What are the likely additions to female labor force participation in the years ahead? Is the United States reaching a plateau now that more than half of all women are in the labor force, or should we anticipate substantial further increases in the decade ahead? No one is in a position to provide a definitive answer, but clearly the trend must be closely monitored, so that policy decisions can be adjusted to the emerging reality.

- The steep rise in households headed by females, including the newly recognized phenomenon of displaced homemakers, has not attracted the attention of the research community and the concern of the policymakers that the problem warrants. We know that a high proportion of all children reared in poverty are living in single-parent families. We also know that it is difficult to fit them into the world of work, where they can become self-supporting. But we know less than we need to know about the forces leading to the explosive growth of these vulnerable families and even less about the preferred ways of helping them to cope with their predicament.

- In addition to the rapid growth in the number of women workers, the last years have seen the beginnings of what will undoubtedly be an extended struggle to reduce and eliminate the many types of overt and latent discrimination to which women have been exposed since they first entered paid employment. But it is far from clear what private and public policies can best contribute to the eradication of the cancer of discrimination, particularly in a world in which there is substantial competition for the limited number of good jobs and preferred career opportunities.

This volume provides a wealth of new data and new analyses that bear on these and related issues connected with the increasing participation of women in the labor force. Since such increased participation has great importance for the nation's economy and society, as well as for the well-being of women, men, and children, it deserves the continuing close attention of both researchers and policymakers.

ELI GINZBERG
Chairman

CONFERENCE SUMMARY

Remarks Made by

Isabel V. Sawhill
Director
National Commission for Manpower Policy

My remarks are intended to summarize the papers and discussions that were presented at the conference. I intend to be nontechnical and straight-to-the-point in my comments, and I intend to take Secretary Marshall's advice that we should not overqualify our results.

Let me begin with a personal note. I have a particular interest in the cohort we have been discussing because it is my cohort, and I have experienced the particular slice of history that has molded the lives of this age group. Whether those of us who are currently in our forties and early fifties are "mature," or simply middle-aged, it is clear that we have lived through a time of upheaval. As Carol Jusenius noted, we are a group who grew up during a period in which most of society felt that "a woman's place is in the home," and we still live in a period in which most of us pursue "dual careers," dividing our time between occupational and family responsibilities.

Frank Mott's paper sets the scene for us by pointing out that the way we respond to the world depends not only on our chronological age but also on the historical period through which we have lived. Thus, at age 40, I do not behave the same way that my mother or my older sister did at age 40. It is these "secular changes" occurring during specific historic periods that I think fascinate us the most, rather than the changes in behavior or attitudes that normally occur as one grows older. I think we ought to devote greater efforts to sorting out these two sets of influences, so that we can discern how the future is going to be qualitatively different from the past and what new trends public policy must be responsive to. Longitudinal data are particularly well suited to achieving this objective.

What trends or secular changes can we identify with existing National Longitudinal Survey data? Certainly, there has been an increasing commitment to "paid" work on the part of women, or at least white women. Black women have always worked in record numbers, so what we are seeing now is some convergence in the labor force participation rates of black and white women. For example, in 1967, NLS data show the labor force participation rate for white women at 47 percent, some 21 points below the 68 percent rate for black women in the same year. By 1972, the rate for whites had increased to 56 percent, and the black rate had declined to 64 percent. These declines in black participation rates were most dramatic for women who were separated or divorced.

Although NLS data show that black women are working somewhat less than in the past, their earnings have risen relative to those of white women. Specifically, black women increased their real annual earnings some 40 percent between 1967 and 1972, while white women had a relatively lower increase of only 16 percent. Nevertheless, the racial disparities in family economic status are still enormous, with black women being five times more likely than white women to live in poverty. Mott speculates that we may be moving to a "dual society," in which there is a kind of disadvantaged underclass whose earnings and employment opportunities are not sufficient for self-support and are probably not much better than the livelihood that public assistance and other income support programs can provide.

It is worth noting that almost all of the papers look at black and white women separately and find important differences. These differences underlie Barbara Jones's eloquent plea for a careful examination of the different circumstances facing these two groups. As she notes, instead of asking employed black women why they are working, it might be more appropriate to ask of unemployed black women why they are not working. The evidence clearly shows that the latter have positive attitudes toward work.

Along with the increased labor force participation of women has come a marked shift in attitudes about sex roles. A major issue at this conference has been the question of whether these attitude changes have been a cause or a consequence of the increasing employment of women. Most researchers have despaired of ever being able to unscramble the "chicken and egg" nature of this relationship. However, the paper by Macke, Hudis, and Larrick has marshaled longitudinal data to untangle this puzzle. They find that attitudes slightly affect the decision of white women to work. Work experience, in turn, affects attitudes quite strongly. Thus, they point out the importance of building the dynamic interaction between attitudes and experience into projections of the female labor force. Our failure to have done this in the past may be one reason our projections have underestimated the size of the female work force. Most notably, last year we created 4 million new jobs but were able to reduce the number of unemployed by only 1 million because the labor force grew by 3 million people, more than half of whom were women.

Policymakers are not the only ones in need of better information. Young women themselves seem unaware of the secular trends that are occurring. As Hawley and Bielby note in their painstaking, although not exhaustive, discussion of previous literature based on the NLS, young women believe that their own future attachment to the labor force at age 35 will be less than that of those women of their own race and education group who are currently aged 35. Perhaps these young women are going to be new trend setters in their rejection of work outside the home; but I rather suspect that they may simply be unaware of their options and that they will eventually want--or have to--adapt to a world that has already moved beyond their own conception of it. Certainly, they need to be made aware of all the options, so that whatever education and early career choices they make are not inhibited by insufficient information.

As the Hawley and Bielby review emphasizes, it is not only the interaction between work experience and attitudes, but the larger web of related changes in fertility, women's earnings, and marital status that need to be sorted out. In a world in which everything is related to everything else, it may be impossible to ever untangle this web, but we are beginning to accumulate some modestly reliable evidence about the major threads that bind the whole together. We know, for example, that women's potential earnings are a major determinant of whether or not they choose to work and thus accumulate experience. We also know that more experience leads to higher earnings. Here again we can see an enormous potential for cumulative change in women's roles once one of these variables is perturbed. And, as the Macke, Hudis, and Larrick paper so successfully demonstrates, longitudinal data enable us to penetrate these complex interactions.

Cherlin grapples with another set of relationships affecting the lives of mature women. His paper explores the interaction between employment and family stability. We have long known that divorced or otherwise unmarried women were more likely to work than their married counterparts, but we now have evidence that female employment and earnings may be a cause as well as a consequence of divorce. Specifically, the probability of marital dissolution is 60 percent higher among those dual-earner families in which the wife's income approaches that of her husband than among families where the wife's income is a third or less than her husband's earnings. Cherlin observes that this finding presents a dilemma to policymakers who value both strong family ties and the rights of women to equal treatment in the labor market. He notes that one way of resolving this dilemma may be to provide social programs, such as day care and shorter or more flexible hours of work, that will both permit women to hold jobs and relieve the burdens this creates for two-earner families.

Both Waite and Vickery urge caution in interpreting the policy significance of this relationship between women's work status and family dissolution. Vickery stated her own concern most forcefully when she noted that economic dictatorship on the part of men can preserve the family by keeping women "barefoot and pregnant." Judging from the reaction of the audience to this comment, I can say that this is an area where feelings run high. Certainly, for many people, divorce represents an escape from an unsatisfactory relationship and may lead to improved emotional well-being. But even when such psychological gains occur, it is clear that most women bear a large financial cost when marriages end. Many must turn to welfare, and others suffer major reductions in their standard of living.

Lois Shaw has done us a particularly commendable service by providing detailed information on the economic consequences of marital dissolution. She points out that the labor force participation rates increased from about 50 to 75 percent for white women who were married in 1967 but separated or widowed by 1972. Further, 25 percent of white women and over 40 percent of black women who were not poor while married, fall into poverty after their marriages end. Almost all who were able to avoid poverty did so because they were employed and thus able to earn enough to support themselves and any children who might still have been in their custody. Here, for the first time, is some pretty hard data on the economic circumstances of the "displaced homemaker" population. There has always been concern about workers who need assistance or retraining because they have been displaced by foreign trade, automation, or other structural changes in the economy. But it is only recently that we have come to realize that a homemaker can also be displaced when she loses a husband, and that she may need similar kinds of assistance. Shaw's assessment is that these women need employment and training, not just income transfers.

Turning from the "structurally" unemployed to the "cyclically" unemployed, it is well established that women move in and out of the labor force in response to the business cycle. Francine Blau uses NLS data to try to determine just how sensitive labor force entry and exit rates are to the unemployment situation. She finds that high unemployment primarily discourages labor force entry among white married women but encourages it among black women. Her computations indicate that roughly 55 percent of white women and 61 percent of black women would have participated in the labor force if the unemployment rate was 4 percent in 1972; whereas, only 50 percent of white women and 66 percent of black women would have participated if the unemployment rate was 8 percent in the same year.

One of the problems with Blau's analysis, as she herself notes, is that her estimates are based on differences in unemployment rates between local areas at one point in time rather than on changes in the overall unemployment rate over time. Thus, on the basis of these data, we can only make tentative estimates about the amount of female labor force discouragement associated with the business cycle. One can be more confident, however, that differences in measured unemployment between areas reflect geographic differences in job opportunities. Blau's findings regarding the sensitivity of female participation rates to these differences suggest that there is much hidden unemployment in depressed areas. This has obvious implications for regional development and structural employment policies.

More important, as Jusenius noted, the NLS data have not yet been mined for fairly simple kinds of information about the duration or incidence of unemployment and its distribution among different groups of women. Put simply, there is still much to learn on this topic.

Once women do find jobs, how well do they do in terms of earnings and occupational status? Fligstein and Wolf note that the sociological literature on occupational status attainment and the economic literature on the determinants of earnings do not come to the same conclusion. Specifically, the earnings of women workers are notably lower than the status of their occupations. The authors evaluate some very sophisticated methodological explanations for this phenomenon and reject them. From this paper we are left to conclude that either women trade money for status to a greater extent than do men, or occupational status is poorly measured, or women are paid less than men for work of equal social value. Unfortunately, we are no closer to understanding why women earn less than men after controlling for differences in measurable qualifications.

In overview, what have we learned from current and past research with these NLS data? In a wonderfully simple and informative summary, Herbert Parnes noted that one of the most consistent findings emerging from the NLS is that there is substantial discrimination by race and sex. Although there is some disagreement over the extent of this discrimination, there seems to be considerable agreement that greater reflection on this problem and more research are needed.

The prevailing acknowledgment of important "knowledge gaps" by our authors and discussants is a clear invitation to reemphasize Secretary Marshall's dictum that we cannot design appropriate remedies for social problems unless we know something about the causes. At the same time, as Carol Weiss suggested, the simple problem-solving model does not incorporate many of the factors affecting the policy-making process as it occurs in everyday practice. Her own studies indicate that a policymaker's receptivity to research depends on (1) the relevance of the research to immediate problems, (2) its technical quality, (3) its conformity to the prior knowledge and values of the user, and (4) the extent to which it can be immediately translated into practical action. Other members of the concluding panel, chaired by Weiss, provided specific illustrations of these general principles and noted their own research priorities.

Margaret McKenna, the highest ranking decision maker who participated in this panel discussion, indicated that research does influence decisions because it is filtered into the policy options that are considered in the course of preparing memos at the agency level. McKenna also noted that top leaders, such as the President, put pressure on those who serve under them for information. This frequently produces "trickle down" pressures that eventually stimulate new research. There are also cases where research findings "trickle up" to policymakers, as when unsolicited advice is provided concerning immediately relevant issues through informal channels. In such cases, timing and relevance are critical determinants of whether the research is used.

The social scientist seeking to influence policy with research must be keenly aware of the limitations and potential effects of such efforts. One would have to agree with the skepticism expressed by a number of participants about the extent to which research can affect policy in direct and immediate ways. For the most part, there is not the time to conduct research or marshal comprehensive data in a sophisticated fashion to match the constantly changing needs of decision makers. Moreover, Congress and the White House are not interested in our academic hairsplitting and the details of our regression equations.

But over the long run, ideas and perspectives developed by social scientists do percolate through all levels of our society, ultimately influencing the development of public policy. It was this more optimistic view that Secretary Marshall expressed at the very beginning of the conference.

* * *

II. SETTING THE STAGE: WHAT HAVE WE ALREADY LEARNED FROM THE NATIONAL LONGITUDINAL SURVEYS?

INTRODUCTORY REMARKS

by

Herbert S. Parnes
The Ohio State University

The principal objective of this conference is to bring to bear on public policy, research on the labor market problems of women. Our conference leader, Isabel Sawhill, has made it clear that the role of each moderator is not merely to introduce the panelists, but to comment on the subject matter under discussion, pointing out why it is important and highlighting gaps in our knowledge. My problem, as moderator of this first session, is that the two papers are designed to serve precisely that function. Frank Mott's paper is explicitly directed at presenting a general background that will be helpful in interpreting the other papers presented at the conference. The Hawley-Bielby paper reviews all of the NLS research on mature women, identifies gaps, and makes suggestions for further research. Rather than invading the territory of those whom I am ultimately to introduce, what I propose to do is to express some views about the relationship between the NLS and policy generally, without necessarily confining myself to the women's cohort.

As the person with the principal nominal responsibility for the National Longitudinal Surveys, I have had many occasions over the years to ponder the question whether the undertaking has been worth the substantial expenditure of public funds that it has required. It became apparent quite early that the contribution of the NLS to policy formation was not going to be made by revealing dramatic and unsuspected remedies for difficult labor market problems; no "cures for cancer," as my erstwhile colleague Paul Andrisani is fond of saying; no dramatic new way to cut unemployment rates in half. However, no realist would have expected such a contribution. The way in which the NLS has improved the potential for sound public policy is through its contribution to a better and more confident understanding of how labor markets operate and of the factors that are responsible for variation in labor market experience. The abundance of explanatory variables that the NLS has provided, the fact that the data are based on national samples, and above all, the longitudinal character of the data have allowed more definitive answers to certain types of questions than had hitherto been possible. Thus, although NLS studies have not pointed to previously undreamed-of policy measures, they have frequently increased the confidence with which policy may be prescribed.

To illustrate, let me make a series of propositions that have implications for policy and that can be documented by NLS evidence. Time does not permit the citation of the evidence here, although I have summarized it elsewhere:*

1. Within broad limits, labor markets operate as economic theory suggests they do. The processes whereby labor supply is supposed to adjust to changes in the levels and composition of demand are clearly visible. However, the correspondence between actual labor markets and theoretical models is much closer as full employment is approached. Thus, full employment is an important policy objective from the standpoint of allocational efficiency, as well as for the more obvious reasons.

2. Even for the four age-sex groups that were selected for the National Longitudinal Surveys because of their special disadvantages in the labor market, most individuals have reasonably satisfactory labor market experiences. Nevertheless, substantial minorities among them clearly require various kinds of help.

3. Health is a very important variable in affecting many aspects of labor market experience. In addition to its obvious relationship with labor force participation, good health has been shown to be positively related to hourly earnings, upward occupational mobility, and job satisfaction, and

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* "The National Longitudinal Surveys: Lessons for Human Resource Policy," Appendix B in Current Issues in the Relationship between Manpower Research and Policy, A Special Report of the National Commission for Manpower Policy, Special Report No. 7 (March 1976).

negatively related to the incidence of unemployment. Thus, investments in health help to solve a variety of labor market problems, in addition to the benefits they confer in their own right.

4. Investments in many types of education and training have clear payoffs in terms of labor market success, with considerable variation depending upon the type of program and according to the characteristics of the individuals involved. But there are difficult problems in identifying the truly independent effects of these programs under different circumstances and for different individuals. Thus, we need to know more than we now do about the nature of the human capital production function.

5. There is substantial variation in the extent of labor market information possessed by young people. Youth from the lower socioeconomic strata--and particularly blacks--are especially disadvantaged in this respect. Moreover, there is a demonstrable link between the amount of information a young man has and his success in the labor market as measured by earnings and occupational status. Hence, one way of equalizing opportunities is to develop measures that will increase the degree of sophistication and knowledge of the world of work among youth from the lower economic strata.

6. There remains--at least in the early 1970s--substantial labor market discrimination on the basis of both race and sex. Granting the difficulty (if not impossibility) of generating conclusive evidence of discrimination, the rich data bank of the NLS has permitted researchers to control statistically for a large number of variables that are related both to race and productivity, yet such controls do not eliminate substantial racial differentials in wages, occupational status, and incidence of unemployment in favor of whites. Sex discrimination is even more difficult to document than race discrimination,

since it is less clear in the case of sex than of race that differences in occupational distribution result from employer discrimination rather than from the educational and job decisions that the "disadvantaged" have been conditioned to make. Nevertheless, when differences in occupational distribution are ignored and earnings are related to determinants of productivity, the disadvantage of women relative to men is even greater than that of blacks relative to whites. Evidence of these kinds, even if not conclusive, is sufficiently persuasive to suggest that efforts to achieve equal opportunity in the labor market need to be continued and strengthened.

7. Attitudes do make a difference in labor market experience and behavior. The longitudinal character of the NLS data has eliminated the ambiguity concerning direction of causation that exists when a relationship between attitudes and behavior is discerned in cross-sectional data. Attitudes--for example, the extent to which an individual perceives success to be contingent on personal effort--affect the extent to which individuals work, as well as how well they do in terms of earnings and occupational status. In turn, such attitudes are also affected by labor market experience. These kinds of evidence suggest that employment and training programs should attempt to improve the motivation of disadvantaged individuals, but that such attempts are likely to be futile unless concurrent efforts are made to modify the opportunity structure so as to insure that initiative will be rewarded.

Now this list of propositions by no means exhausts the policy-relevant findings from the NLS, but I think it is nonetheless impressive. I have deliberately couched them in the most general terms. More specific illustrations that are particularly pertinent to women--as well as additions to the list--are contained in the papers that are the subjects of discussion today.

* * *

I wish to thank Jean Haurin for her outstanding research assistance on this paper. A number of my colleagues at the Center for Human Resource Research and elsewhere provided helpful comments. Any remaining errors in the paper are the sole responsibility of the author.

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THE NLS MATURE WOMEN'S COHORT: A SOCIOECONOMIC OVERVIEW

by

Frank L. Mott
Center for Human Resource Research
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The NLS mature women's cohort in several important ways represents a transition generation of American women. Women who were 30 to 44 years of age in 1967 were born between 1923 and 1937. The older members of this age group were born in the post-World War I decade of the 1920s, spent a substantial portion of their childhood in the Depression years, and entered adulthood during World War II. In contrast, the youngest members of the cohort were born during the Depression, spent their childhood years during World War II, and attained maturity during the mid and late 1950s. To the extent that adult behavior patterns and attitudes reflect childhood and early adult experiences, one might expect considerable heterogeneity in how members of this 30 to 44 year old cohort of women behave in the marketplace and view their adult work and family roles.

In addition to variations within this group due to different background situations, there also are the more anticipated differences due to the fact that the older women in the cohort are at a different point in the life cycle than are the younger women. Thus, sociodemographic and economic characteristics for the group as a whole may disguise major variations within the group.

Aside from variations in behavior patterns and attitudes due to the above secular 1/ and aging effects, it is generally acknowledged that the 1967 to 1972 period was one of significant social and economic change within our society; as such, phenomena that may have been pronounced in 1967 might no longer have been so in 1972, and vice versa.

1/ The term "secular change" refers to long-run social transitions, such as smaller families and the growth of women workers, which are primarily independent of cyclic and cataclysmic changes. Secular changes result from social conditions unique to a given era or set of circumstances.

Within the context of the above factors, this paper has several objectives. The first objective is to provide a general background about the cohort to help interpret other papers presented at the conference. A second objective is to illustrate that generalizations made concerning the relationship between various socioeconomic and demographic factors and differing dimensions of labor force activity for the overall cohort should be interpreted cautiously. Finally, a number of the behavioral and attitudinal trends presented in this paper represent dramatic new evidence about relatively recent patterns of change in labor force behavior and attitudes concerning work attachment. The uniqueness of this evidence reflects the uniqueness of the data set. The longitudinal nature of the data enables one to follow the same women over a five year period--1967 to 1972--which, as will be demonstrated, evidenced major changes in social and economic behavior patterns and attitudes.

AN ABBREVIATED DEMOGRAPHIC PROFILE[2]

Although the basic demographics for this group of women may be of some interest in their own light, they are included here primarily as an aid for interpreting the subsequent sections on labor force, income, and attitudinal patterns.

Because of major variations between black and white women in this sample, virtually all of the discussion that follows will be for the black and white respondents separately. 3/ About 88 percent of the white women and only two-thirds of the black women were married and

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2/ The separate black and white statistics presented are weighted so as to properly represent national cross sections of black and white women. The sample sizes, or "Ns," in the tables indicate the actual number of respondents in the relevant category.

3/ Also, all comparisons across years will be limited to women interviewed in all years to avoid problems associated with selective biases due to nonrandom attrition patterns. In addition, all of the data in this section are for 1967 unless otherwise specified.

living with their husband in 1967. 4/ This higher incidence of marital disruption among black women is associated with higher levels of work participation, as will be shown below. Also, the vast majority--about 80 percent--of women of both races had school-age children. Even more relevant from a labor force perspective, slightly over one-third of both black and white women in 1967 still had a youngest child under the age of 6. By 1972, the figure had declined to around 15 percent. As may be noted in Table 1, this decline partly reflected the aging process and in addition was associated with earlier patterns of childbearing among some members of this cohort of women. In particular, women who were 35 to 39 showed a significant decline in the presence of pre-school-age children over the five year period, partly reflecting an earlier average age for completion of childbearing for women who were 35 to 39 in 1972 compared to their 1967 counterparts. 5/ This decline tends to be associated with increasing labor force participation rates for that five year age group over the five year period.

4/ The white not married with spouse present group included 6.3 percent separated or divorced, 1.6 percent widowed, and 4.5 percent never married. The black not married with spouse present group was predominantly separated or divorced (21.6 percent), 5.2 percent widowed, and 7.1 percent never married. This, of course, varied somewhat by age. By age 40-44 about 2.5 percent of the white women and 7.0 percent of the black women were widowed. These percentages represent the percentages of the total respondents, regardless of marital status.

5/ Women who were 35 to 39 in 1972 were on average about 20 years of age in 1955. This represented approximately the peak of the post-World War baby boom. For example, retrospective current population data indicate that the cohort of women born in 1935 to 1939 had their children at earlier ages than did any of the surrounding birth cohorts. However, their age-specific fertility was below that of the other two preceding five-year cohorts above the age of 30. See Table 3 in "Fertility Histories and Birth Expectations of American Women: June 1971," U. S. Bureau of the Census, Current Population Reports, Series P-20, No. 263, U. S. Government Printing Office, Washington, D. C., 1974.

Table 1. PERCENTAGE OF MATURE WOMEN'S COHORT WITH PRESCHOOL CHILDREN IN 1967 AND 1972 BY RACE AND AGE[1]

Race and age	Number of respondents	1967	Number of respondents	1972
Whites	3,005	36.7	3,005	14.3
30-34	968	57.3	(2/)	(2/)
35-39	951	37.5	968	27.4
40-44	1,086	17.7	951	13.1
45-49	(2/)	(2/)	1,086	3.8
Blacks	1,110	38.7	1,110	15.9
30-34	338	57.0	(2/)	(2/)
35-39	367	43.1	338	28.8
40-44	405	18.4	367	16.9
45-49	(2/)	(2/)	405	3.6

1/ Sample limited to women interviewed in all survey years.
2/ Data not available.

The bulk of the women in the sample live in urban areas (65 percent for the white women and 72 percent for the black women). However, the racial distribution of residences within metropolitan areas varies greatly, with fully 60 percent of all the black women living in central cities as compared to only 24 percent for their white counterparts. This geographic composition does not represent any major shift for these women from when they were 15 years old. 6/

From a socioeconomic perspective, about a third of the white women are high school dropouts (had completed 11 or fewer years of school), and about 20 percent have at least some college education. In contrast, about 60 percent of the black women are high school dropouts and 10 percent have attended or completed college. There is also significant variation by age within the mature women's cohort, with older women in the cohort having completed less education than have the younger women. 7/ This represents a major transition from their parents' generation, as fully 67 percent of the white women and about 80 percent of the blacks had mothers who had not completed high school. Dropout estimates were even higher for the respondents' fathers.

In addition to formal educational experiences, there also are large numbers of women in the cohort who are enrolled in occupational training programs of one type or another. The percentages having taken training in any one year varied from 13 to 17 percent for the white respondents and from 14 to 18 percent for the

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6/ The data referencing age 15 are somewhat cruder estimates than are the current residence status information. However, the crude comparison between current status and age 15 shows a very close match in urban-rural residence status.

7/ This trend toward increasing educational attainment continued to the younger women cohorts of 14 to 24 year old women, as only 22 percent of the white 20 to 24 year old women not enrolled in school (in 1968) and 40 percent of the black 20 to 24 year old women not enrolled were high school dropouts. This is the first of several comparisons with the younger cohort of women aged 14 to 24 in 1968 that will be made in this paper.

black women. 8/ For both black and white women, the trend over 1969 to 1972 period (the only years for which this information was available) was downward, partly reflecting the fact that the older women in the cohort are less likely to be in a training program. In addition, for black women, there was a definite secular trend toward lower levels of training participation over the three year period.

Health problems are not inconsequential for this cohort of women. Overall, by 1972 about 17 percent of the white women and about 25 percent of the black women indicated that they had a health problem that limited the amount or kind of work they could do. Among the white women, about 13 percent of those who were 35 to 39 in 1972 indicated a health problem, compared with about 22 percent for the 45 to 49 year old group. Comparable estimates for the black women were 18 and 33 percent, respectively. Thus, as this cohort ages, the health factor will affect the ability of increasing numbers of women in this cohort to participate in the labor force.

COMMITMENT TO THE WORK FORCE

Even a casual glance at Table 2 suggests several important differences between the labor force activity of the black and white respondents. Black labor force participation rates at all ages and in all years are higher than the white rates. It is of some interest, however, to note several dramatic trends during the 1967 to 1972 period that resulted in a significant convergence of labor force participation rates between

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8/ Unless otherwise specified, all of the remaining data in this chapter will focus on women in the cohort who were interviewed in all survey years. Although this may slightly affect the national representativeness of some of the data, it will increase the meaningfulness of the data from the perspective of cross-year comparisons. Effectively, what this does is to introduce any later year sample attrition biases into the earlier years. However, reflecting the low levels of attrition for the cohort (11 percent for white respondents and 13 percent for blacks in 1972), this is a relatively minor problem.

Table 2. LABOR FORCE PARTICIPATION RATES, 1967 TO 1974, BY RACE AND AGE IN 1967[1]

Race and age in 1967	Number of respondents	1967	1969	1971	1972	1974
Whites	3,005	46.8	50.4	54.7	55.8	59.1
30-34	968	43.3	45.2	51.4	53.7	59.2
35-39	951	46.4	51.3	56.4	55.9	61.6
40-44	1,086	50.3	54.3	56.2	57.4	56.6
Blacks	1,110	67.7	67.9	65.7	64.3	66.1
30-34	338	62.3	65.9	64.0	62.3	69.2
35-39	367	70.4	70.8	65.4	64.0	67.0
40-44	405	70.0	66.9	67.5	66.3	62.6

[1] Sample limited to women interviewed in all survey years.

the two racial groups. In 1967 the overall labor force participation rate for the white cohort was 46.8 percent, about 21 points below that for the black group. Over the five-year period, the white rate gradually rose to 55.8 percent, while the black rate declined slightly to 64.3 percent. As a result, the gap in rates between the two groups was more than halved, to less than nine percentage points by 1972.

Further insight into this trend may be gained by examining labor force participation patterns for women who were 35 to 39 and 40 to 44 years of age in 1967 and 1972. These two five year age groups overlapped both the 1967 and 1972 survey years and thus make possible separate examination of both the aging and the secular components of the change. For white women, some of the increase in the overall level of labor force participation reflects the fact that labor force rates increase as the women age past the prime childbearing years. Most dramatic, however, are the sharp secular increases in age-specific labor force participation rates. As may be noted in Table 3, the labor force participation rate for white 35 to 39 year old women increased by 7.3 points, from 46.4 to 53.7 percent, between 1967 and 1972; and the rate for 40 to 44 year old women increased by almost six percentage points. For the most part, the rates specific to marital status also showed increases.

In contrast, the age-specific black labor force rates declined sharply for virtually all marital status categories. By far the largest decreases are for black women who were either separated or divorced. From a slightly different perspective, in 1967, black separated or divorced 35 to 39 year old women had labor force participation rates about 22 points above those for their white counterparts. By 1972, the white rate was 16 points above the black rate. Similar patterns were evidenced for the 40 to 44 year old age group.

After noting the above facts, it is also important to indicate that the National Longitudinal Surveys data for both the older and younger women's cohorts differ systematically in several important ways from comparable Current Population Survey or decennial census data. In general, NLS respondents are more likely to report marginal labor force attachments. 9/ This often leads

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9/ See Herbert S. Parnes et al., Career Thresholds, vol. 1 (February 1969), Appendix E, for detailed comparison of the data from the NLS and from the CPS.

Table 3. LABOR FORCE PARTICIPATION RATES IN 1967 AND 1972 BY AGE, RACE AND MARITAL STATUS[1]

Race and marital status	Age 35 to 39					Age 40 to 44				
	Number of respondents	1967	Number of respondents	1972	Change 1967 to 1972	Number of respondents	1967	Number of respondents	1972	Change 1967 to 1972
Whites	951	46.4	968	53.7	+ 7.3	1,086	50.3	951	55.9	+ 5.6
Married, spouse present	835	43.1	832	49.6	+ 6.5	949	46.7	797	51.7	+ 5.0
Separated or divorced	53	62.9	80	78.8	+15.9	81	72.3	81	81.5	+ 9.2
Widowed	14	(2/)	11	(2/)	(2/)	28	65.7	29	67.1	+ 1.4
Never married	49	81.5	45	87.1	+ 5.6	28	89.1	44	80.6	- 8.5
Blacks	367	70.4	338	62.3	- 8.1	405	70.0	367	64.0	- 6.0
Married, spouse present	243	66.0	185	62.2	- 3.8	267	66.4	234	63.4	- 3.0
Separated or divorced	86	84.8	104	63.0	-21.8	79	87.1	81	68.9	-18.2
Widowed	22	(2/)	14	(2/)	(2/)	31	49.9	39	61.5	+11.6
Never married	16	(2/)	35	56.9	(2/)	28	80.4	13	(2/)	(2/)

1/Sample limited to women interviewed in all survey years.
2/Data not shown where sample size is less than 25 cases.

to systematically higher labor force rates in the NLS sample for black respondents, as well as for categories of women where large numbers are employed part time or are with a job and not at work. Women who have recently had a child often fall in this last category. 10/ Table 4 provides CPS and NLS labor force participation rates by race for 35 to 44 year old women in 1967 and 1972. It is evident from the perspective both of cross-sectional levels of participation and of longitudinal trends in levels of participation, that major interpretive differences can result, depending on the data set one uses. Although both data sets suggest a convergence between black and white rates over the five year period, the NLS convergence is much more pronounced. Even though all questions regarding which data set is more "accurate" cannot be resolved, it is nonetheless important for researchers to be aware of these differences, since they can have significant implications for many cross-sectional and longitudinal substantive labor force analyses.

Whereas levels of labor force participation show a racial convergence, a more careful examination of the intensity of work participation suggests other trends. As noted in Table 5, for both white and black women, there is a trend toward more full-time employment for those who are employed. This movement toward more full-time employment has, for white women, both an aging as well as a secular component: within the women's cohort, older white women, who on average have older children, are more likely to be employed full time. Also, white women in a specific five year age group were more likely to be working full-time in 1972 than in 1967. Thus, whether gauged from the perspective of labor force participation levels or hours worked, mature white women evidence increasing levels of work commitment over the half decade.

For black women, there is no pattern of increasing full-time employment associated with aging per se. However, there is some evidence of a secular increase in full-time participation for both 35 to 39 and 40 to 44 year old women.

10/ See Frank L. Mott and David Shapiro, "Work and Motherhood: The Dynamics of Labor Force Participation Surrounding the First Birth," Years for Decision, vol. 4, Center for Human Resource Research, Ohio State University (November 1977).

Table 4. LABOR FORCE PARTICIPATION RATES IN 1967 AND 1972 FOR NLS AND CPS WOMEN AGE 35 TO 44, BY RACE

Race	NLS		CPS	
	1967	1972	1967	1972
Whites	49.4	55.1	46.4	50.7
Blacks	68.5	61.9	60.8	60.7
Difference	+19.1	+ 6.8	+14.4	+10.0

NOTE: The NLS data in this table are for all respondents interviewed in either 1967 or 1972. CPS data are annual averages and NLS data reflect interviews carried out approximately during the period of April through June. Examination of monthly CPS data suggests no seasonal bias for the NLS interview months, as the second quarter labor force participation rates are virtually identical to the annual average rates for both black and white, 35 to 44 year old women.

SOURCE: U.S. Dept. of Labor, Manpower Admin. Manpower Report of the President - March 1973. Washington, D.C.: U.S.G.P.O. Table No. A-4, pp. 131-32.

Table 5. PERCENTAGE OF EMPLOYED WOMEN WORKING 35 OR MORE HOURS PER WEEK IN 1967 AND 1972, BY MARITAL STATUS, RACE AND AGE IN 1967[1/]

Race and age in 1967	1967						1972					
	Number of respondents	Total marital status	Number of respondents	Married, spouse present	Number of respondents	Other marital status	Number of respondents	Total marital status	Number of respondents	Married, spouse present	Number of respondents	Other marital status
Whites	1,265	57.8	1,009	52.8	256	77.2	1,564	66.5	1,239	62.2	325	82.9
30-34	381	52.7	295	45.0	86	78.5	481	62.8	381	56.7	100	86.3
35-39	394	55.0	320	51.2	74	71.8	505	68.0	393	64.1	112	81.5
40-44	490	64.1	394	60.0	96	80.1	578	68.3	465	65.1	113	81.5
Blacks	635	61.8	393	59.3	242	65.9	631	68.1	373	71.4	258	63.0
30-34	172	64.2	98	64.9	74	63.3	192	66.9	105	73.7	87	57.3
35-39	213	64.3	138	61.6	75	69.1	214	69.7	138	71.6	76	66.4
40-44	250	57.7	157	53.8	93	65.1	225	67.7	130	69.3	95	65.2

[1/] Sample limited to women interviewed in all survey years.

As was the case with black and white labor force participation levels, major racial variations in work intensity appear when the data are decomposed along marital dimensions. Although black women living with their husbands are generally more likely to be employed full time than are their white counterparts, a reverse pattern exists for women who do not have a husband present (including the separated, divorced, and widowed, as well as those never married). Thus, black women without husbands present are not only less likely to be in the labor force, but in addition, are much less likely to be employed full time if they are working.

The increasing pattern of work attachment for the white women in the sample is at least partly a reflection of the aging of their children. As noted earlier, the overall proportion of the white cohort that had a preschool child declined from 37 to 14 percent, reflecting both their aging and historic differences in childbearing patterns. Focusing more narrowly on white women who were 35 to 44 years of age in 1967 and 1972, it may be noted that their labor force participation rate increased from 48 to 55 percent over the five year period, with about two points of the seven-point increase reflecting the lower proportions with pre-school-age children (see Table 6). 11/ In contrast, black women at those ages had their overall labor force participation rate decline by seven points even though they also evidenced significant declines in fertility. That all of the above patterns are widespread may be evidenced by the fact that white participation rates rose and black participation rates fell for women both with and without preschool children.

As a final dimension of labor force commitment, Table 7 presents the distribution of weeks worked during 1966 and 1971 for women who were employed at any time during that year. 12/ In both 1966 and 1971, the vast majority of women workers at these ages were employed for most of the year. Around half were year-round employees, and over three quarters of the white workers and about 80 percent of the black workers were employed over 26 weeks. There are no apparent major trends along this dimension over the 1966 to 1971 period.

11/ This statistic was arrived at by standardizing the 1967 distribution of 35 to 44 year old women against the child status of their counterparts in 1972.

12/ The 1966 statistic was for weeks worked in past year, whereas the 1971 statistic was for weeks worked since last survey date.

Table 6. LABOR FORCE PARTICIPATION RATES AND PERCENTAGE WITH PRESCHOOL CHILDREN FOR WOMEN AGE 35 TO 44 YEARS OF AGE IN 1967 AND 1972, BY RACE[1]

Race	Percent with preschool child		Labor force participation rate					
			1967			1972		
	1967	1972	Total	With preschool child	Without preschool child	Total	With preschool child	Without preschool child
Whites	27.3 (N = 2,037)	20.0 (N = 1,919)	48.4 (N = 2,037)	26.3 (N = 546)	56.7 (N = 1,491)	54.8 (N = 1,919)	34.9 (N = 386)	59.8 (N = 1,533)
Blacks	30.5 (N = 772)	22.5 (N = 705)	70.2 (N = 772)	55.9 (N = 252)	76.2 (N = 520)	63.2 (N = 705)	47.4 (N = 173)	67.9 (N = 532)

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[1] Sample limited to women interviewed in all survey years.

Table 7. NUMBER OF WEEKS WORKED, BY RACE, FOR 1966 AND 1971[1]

Race	Number of respondents	Percentage distribution				Median number of weeks	Mean number of weeks
		Total	26 weeks or less	27 to 48 weeks	49 weeks or more		
Whites							
1966	1,388	100.0	23.5	22.7	53.8	50.1	39.7
1971	1,227	100.0	15.2	40.8	44.0	46.6	40.8
Blacks							
1966	768	100.0	21.5	23.0	55.4	50.9	40.2
1971	527	100.0	11.8	35.2	53.2	48.8	42.7

[1] Sample limited to women interviewed in all survey years and who reported any income from wages, salary, commissions or tips from all jobs before deductions.

INCOME, EARNINGS, AND LABOR FORCE PARTICIPATION

The 1966 to 1971 period was one of rising real income levels for the mature women's cohort. Overall, real white family income rose 16 percent, and black income rose about 22 percent over the half decade (Table 8). This trend reflects a number of factors. First, the husbands of most of the women were at ages where they were approaching their peak earning power. This is suggested by the general upward slope for most of the five year income curves in Chart I. However, of equal importance is the fact that real family income for women at the same ages in 1967 and 1972 rose for both black and white women who were 35 to 39 and 40 to 44 years old. This increase was particularly pronounced for the white women. The income matrix in Table 9 further illustrates the asymmetry in family income transitions between 1966 and 1971. For all 1966 income categories, except the highest, there was more movement upward in adjusted income levels by 1971 than there was movement downward. This pattern was particularly pronounced for white respondents. 13/

Charts 2 and 3 explore one particular dimension of this income picture--the transition from poverty, utilizing the official CPS poverty definitions for 1966 and 1971. The major racial variations in the proportion of respondents living below the poverty line, as well as the significant decline in those proportions between 1966 and 1971, may be noted in Chart 2. The overall white proportion below the poverty line declined from about 9 to less than 6 percent during the period; the black proportions declined from 42 to 33 percent. 14/

13/ This pattern was also generally apparent for the separate five year age group with upward income movements most pronounced for the women who were 30 to 34 in 1967. Also, for black women, the upward asymmetry is only evident for respondents with family incomes below $7,500.

14/ The official poverty definition is based on the relationship between the family's income level, the number of family members, and whether or not they are living in an urban or a rural area in the relevant year. See the following U. S. Bureau of the Census publications all in the Current Population Report series: The Extent of Poverty in the United States 1959 to 1966, P-60, No. 54; Revision in Poverty Statistics 1959 to 1968, P-23, No. 28; and Characteristics of the Low Income Population 1971, P-60, No. 86.

CHART 1. MEAN FAMILY INCOME, 1966 THROUGH 1971,
BY AGE AND RACE IN 1967
(IN 1966 DOLLARS)

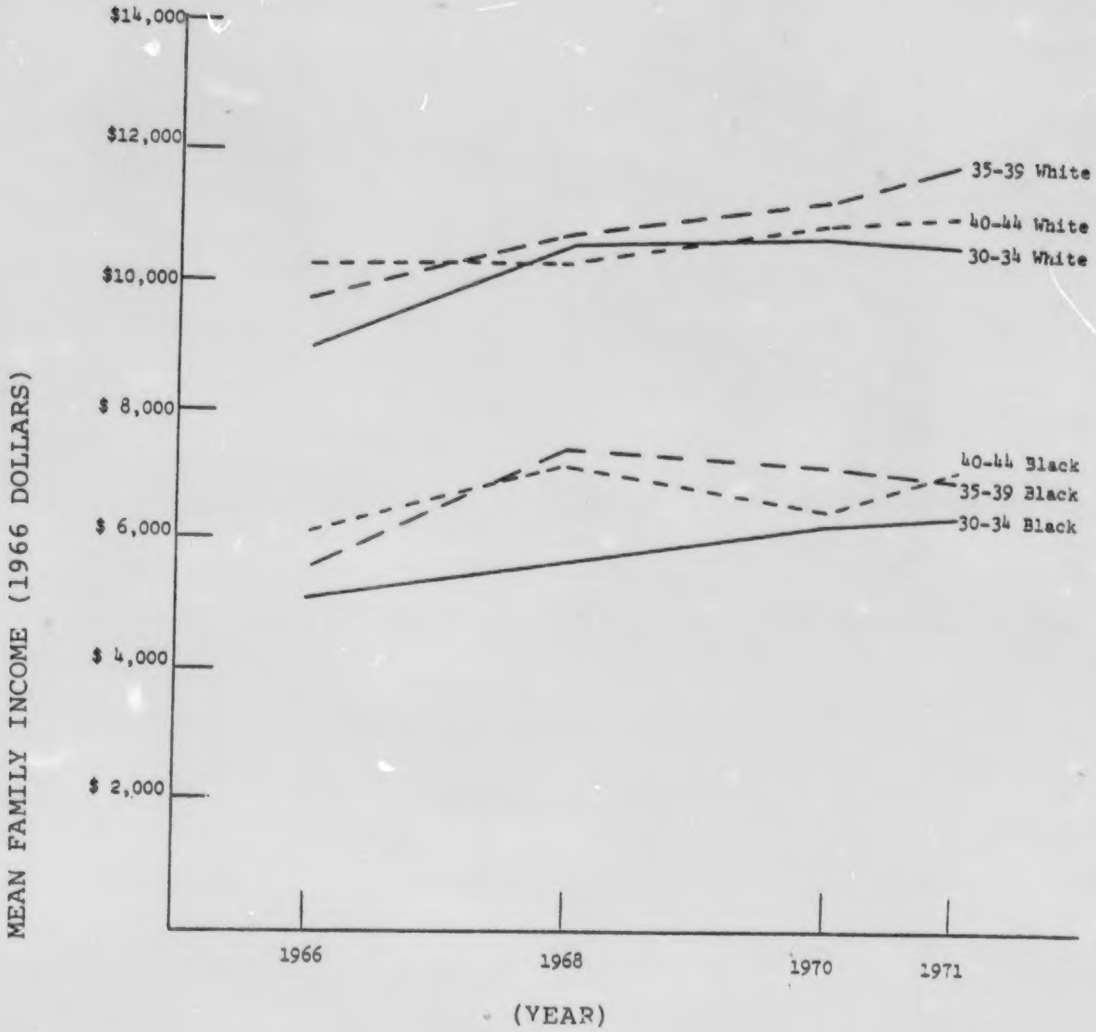

CHART 2. CUMULATIVE PERCENTAGE DISTRIBUTION OF FAMILY INCOME IN RELATION TO POVERTY LEVEL, 1966 AND 1971, BY RACE

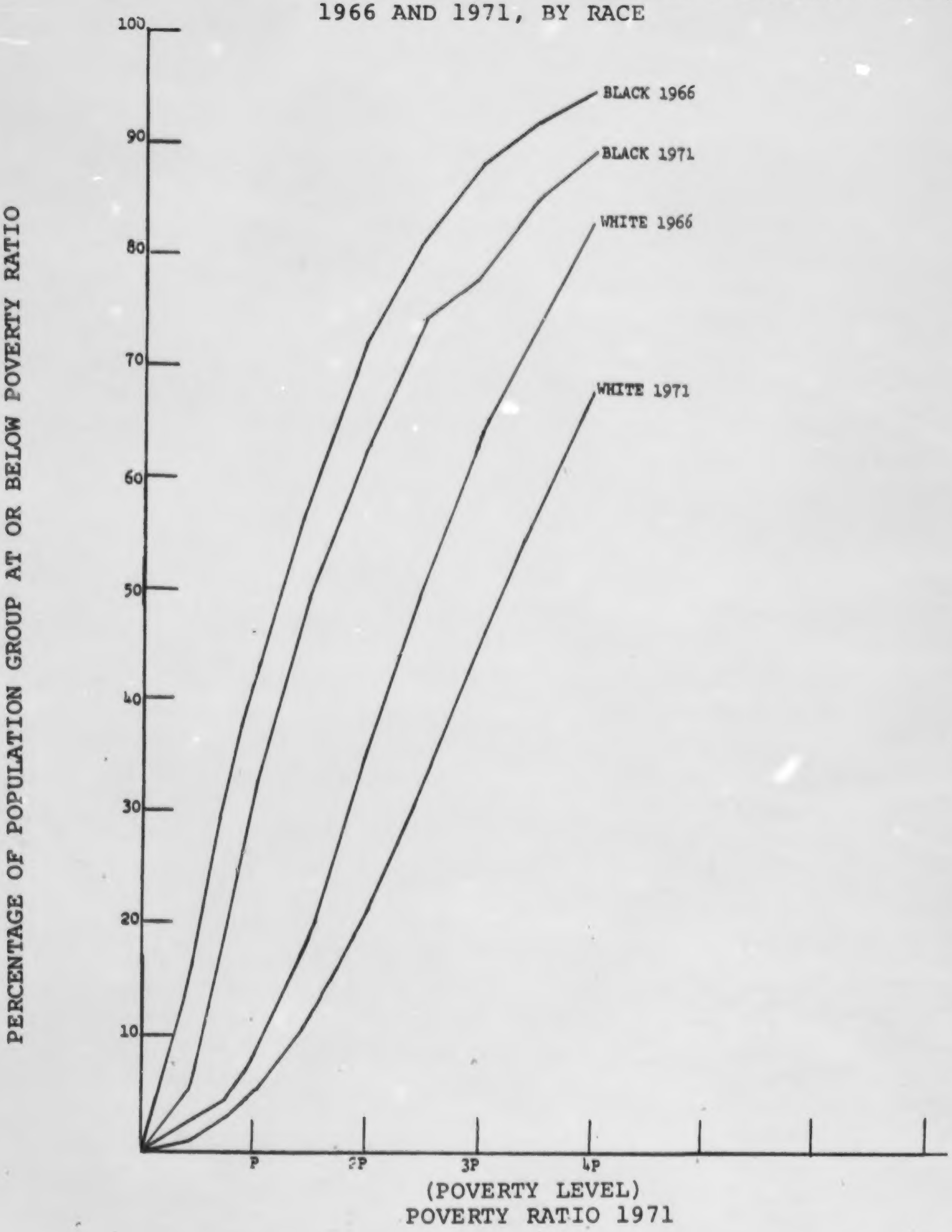

CHART 3. DISTRIBUTION OF 1966 POVERTY GROUP IN 1971, BY RACE

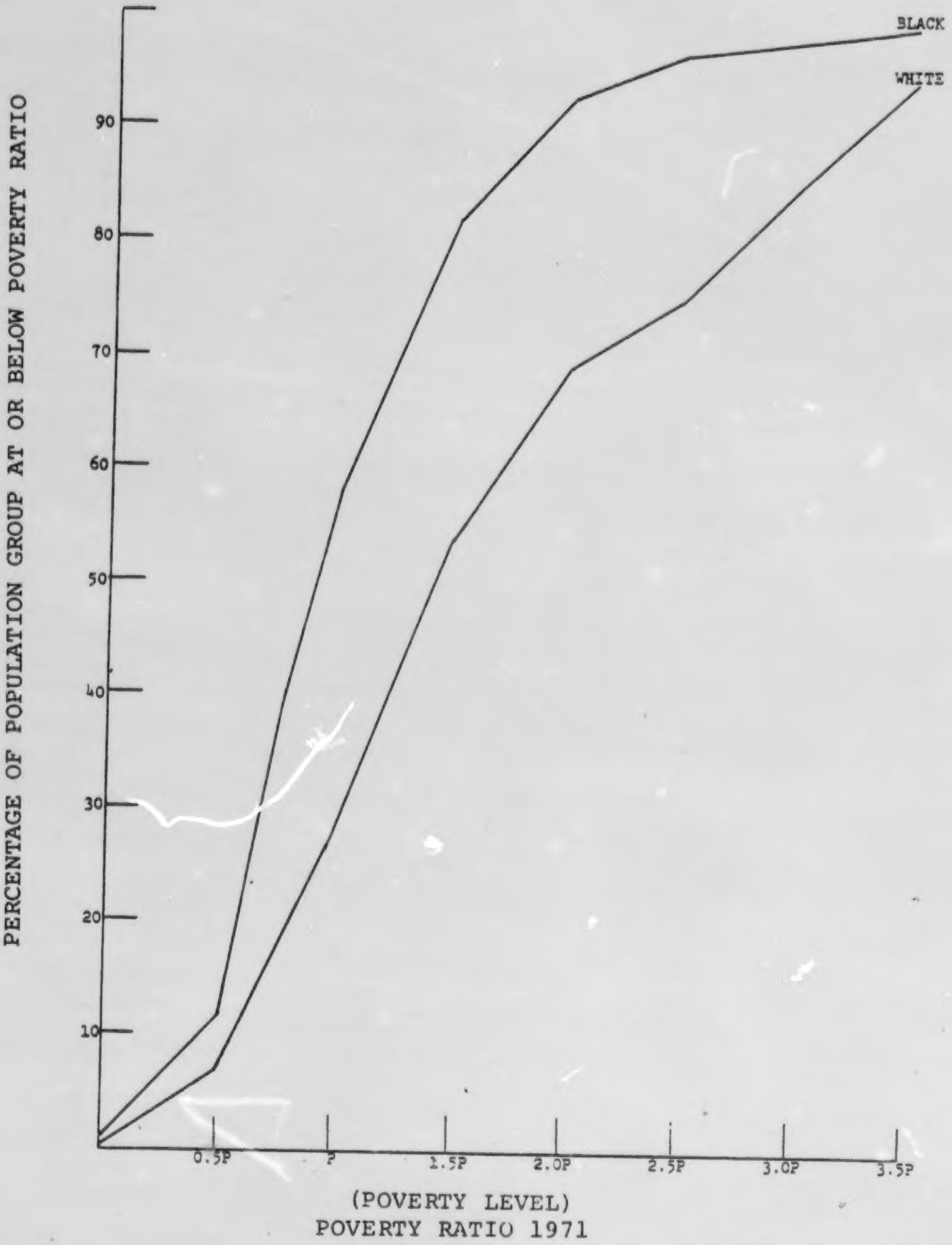

Table 8. MEAN FAMILY INCOME BY RACE AND YEAR[1]

Year	Whites			Blacks			Ratio of white to black income
	Number of respondents	Mean	Mean adjusted to 1967 dollars	Number of respondents	Mean	Mean adjusted to 1967 dollars	
1966	2,381	$ 9,366	$ 9,647	945	$5,481	$5,645	1.71
1968	2,055	10,958	10,520	833	7,049	6,767	1.55
1970	2,414	12,764	10,977	917	7,807	6,714	1.63
1971	1,955	13,648	11,191	799	8,391	6,881	1.63

[1] Sample limited to women interviewed in all survey years.

Table 9. TOTAL FAMILY INCOME 1971 BY TOTAL FAMILY INCOME 1966 AND RACE[1]

Total family income 1966 and race	Number of respondents	Total family income 1971 (percentage distribution)						Vertical percentage distribution
		Total	Less than $3,000	$3,000 - 4,999	$5,000 - 7,499	$7,500 - 9,999	$10,000 or more	
Whites	1,614	100.0	5.9	8.3	14.8	18.3	52.7	100.0
Less than $3,000	100	100.0	34.0	25.7	15.2	10.2	14.9	5.6
$3,000 - 4,999	164	100.0	16.9	30.3	26.2	11.7	14.9	9.2
$5,000 - 7,499	359	100.0	5.7	8.8	29.5	30.3	25.8	21.9
$7,500 - 9,999	381	100.0	1.1	4.9	12.7	26.9	54.4	23.9
$10,000 or more	610	100.0	2.3	2.5	5.1	9.1	80.9	39.3
Blacks	693	100.0	21.6	23.6	22.9	13.6	18.3	100.0
Less than $3,000	216	100.0	46.3	31.3	10.7	8.3	3.4	28.1
$3,000 - 4,999	195	100.0	17.5	37.3	29.7	8.6	6.9	27.0
$5,000 - 7,499	139	100.0	10.8	15.5	31.4	28.0	14.3	21.4
$7,500 - 9,999	72	100.0	6.4	9.6	31.1	19.7	33.2	11.1
$10,000 or more	71	100.0	6.6	3.1	13.5	6.3	70.4	12.4

[1] Sample limited to women interviewed in all survey years. All income is adjusted to 1967 dollars.

Thus, even though the black proportions declined by nine points over the period, the average black woman in 1971 still was more than five times as likely to be living in poverty as was her white counterpart.

Chart 3 highlights the stability of poverty "status" for this age group of women. Of all the white women living in poverty in 1966, while 70 percent were above the poverty line in 1971, only 45 percent were above the 1.5 times the poverty level, and 30 percent were in a family with an income more than twice the poverty level. Black poor families are even less successful in improving their status, as almost 60 percent of the black women in poverty in 1966 were still in poverty in 1971. Thus, it is clear that poverty represents much more of a permanent status for the black women in the NLS sample.

Shifting from the overall family income levels to the respondents' contribution to that income, Table 10 indicates the average respondent earnings in 1966 and 1971 for all respondents, as well as for respondents who worked at some time during the year. Overall, black and white women increased their real earnings about 26 and 29 percent, respectively, over the five year period. However, black working women increased their real annual earnings almost 40 percent over the period, compared with only 16 percent for white working women. As a result, the absolute annual earnings advantage of white working women declined from $724 to $283. It is of some interest to note that this earnings differential narrowed even though there was no narrowing in the occupational differences (as measured here) between black and white employed women. In both 1967 and 1972, about two thirds of employed white women held white collar jobs, as compared with 27 percent of black employed women in 1967 and 32 percent in 1972. Black women in this age cohort continue to be primarily employed in service and blue collar jobs. In addition, it may be recalled that there were no overall significant differences between white and black women either in the average number of weeks worked in 1966 or 1971 or in the average number of hours worked per week.

A further breakdown of the respondents' earnings by weeks worked in the past year indicates that a substantial proportion of the improvement in the black respondents' earnings position reflected higher black earnings for year-round workers. In 1966, white women

Table 10. RESPONDENT MEAN ANNUAL EARNINGS (IN 1967 DOLLARS) IN 1966 AND 1971 BY RACE AND AGE IN 1967[1]

Race and age in 1967	All respondents					Respondents with earnings in year				
	Number of respondents	1966	Number of respondents	1971	Percentage change	Number of respondents	1966	Number of respondents	1971	Percentage change
Whites	2,963	$1,522	2,949	$1,970	+29.4	1,412	$3,192	1,568	$3,694	+15.7
0-34	955	1,348	955	1,843	+36.7	433	2,989	513	3,423	+14.5
5-39	942	1,494	935	1,981	+32.6	447	3,145	497	3,711	+18.0
0-44	1,066	1,704	1,059	2,072	+21.6	532	3,394	558	3,925	+15.6
Blacks	1,097	1.790	1,080	2,257	+26.1	779	2,468	693	3,411	+38.2
0-34	335	1,619	330	2,094	+29.3	236	2,310	213	3,170	+37.2
5-39	361	1,834	356	2,275	+24.0	255	2,493	233	3,380	+35.6
0-44	401	1,900	394	2,383	+25.4	288	2,580	247	3,657	+41.7

[1] Sample limited to women interviewd in all survey years.

working 52 weeks during the year earned fully 50 percent more than did their black counterparts--$4,458 (in 1967 dollars), compared with $2,954. By 1971, white full-year workers had increased their mean annual earnings marginally to $4,638, while the same black women now earned $4,066. Thus, while differences still remained, the black women had made substantial inroads toward attaining earnings parity.

The same could not, however, be said for her male counterpart. The average white husband (to the female respondent) increased his annual earnings (in 1967 dollars) from $7,279 in 1966 to $7,970 in 1971; while the average black husband went from $4,523 to $5,095. Thus, in both years, the average white husband earned approximately 60 percent more than did his black counterpart.

Given the fact that black women earn only slightly less than do white women and that black men have earnings well below those of white men, it should not be surprising that the average black woman makes a much more substantial contribution to her family's income. Table 11, which focuses more narrowly on husband-wife families, shows that the average black wife contributes about one fourth of her family's income, compared with substantially smaller proportions for the average white woman. 15/

ATTITUDES TOWARD HOME AND WORK

Much of the labor force data presented are consistent with the notion that within the mature women's cohort there are some indications of a shift toward increasing work activity and concomitant increases in real earnings. It is thus of some interest to examine whether or not the behavior patterns noted above are consistent with attitudes toward work and family roles expressed by these women. In the 1967 and 1972 interviews, the women were asked several questions concerning their feelings about home and work. Table 12 suggests how these ideas changed during the five year period. For both the attitude items in Table 12, there was a definite shift toward more positive ideas about

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15/ These proportions show no variation by age of respondent.

Table 11. WIVES CONTRIBUTION TO FAMILY INCOME[1] IN 1966 AND 1971 BY RACE FOR MARRIED WOMEN WITH SPOUSE PRESENT[2]

Race	1966			1971		
	Mean family income	Mean respondent earnings	Respondent contribution (percent)	Mean family income	Mean respondent earnings	Respondent contribution (percent)
Whites	$10,205 (N = 2,070)	$1,318 (N = 2,071)	12.9	$12,191 (N = 1,607)	$1,866 (N = 1,608)	15.3
Blacks	$ 6,968 (N = 601)	$1,746 (N = 601)	25.1	$ 8,538 (N = 452)	$2,295 (N = 454)	26.9

[1] All income is in 1967 dollars.
[2] Sample limited to respondents interviewed in all survey years.

Table 12. PERCENTAGE AGREEING WITH SPECIFIED WORK ROLE ATTITUDES IN 1967 AND 1972, BY RACE AND AGE: OLDER WOMEN'S COHORT1/

Race and age	1967			1972		
	Number of respondents	Okay to work if husband agrees	Okay to work even if husband disagrees	Number of respondents	Okay to work if husband agrees	Okay to work even if husband disagrees
Whites	2,945	74.7	12.6	2,945	83.1	20.5
30-34	947	77.5	13.3	(2/)	(2/)	(2/)
35-39	931	76.8	13.3	947	86.9	22.6
40-44	1,067	70.2	11.3	931	84.2	19.7
45-49	(2/)	(2/)	(2/)	1,067	78.6	19.2
Blacks	1,079	82.7	23.8	1,079	86.2	29.1
30-34	328	84.9	23.2	(2/)	(2/)	(2/)
35-39	360	88.0	25.4	328	87.9	34.9
40-44	391	76.0	22.9	360	86.1	28.6
45-49	(2/)	(2/)	(2/)	391	85.3	24.4

1/Sample limited to women interviewed in all survey years.
2/Data not available.

market work for white women 35 to 39 and 40 to 44 years old, the age groups common to the two interview years. Only black women 35 to 39 years of age showed no shift toward more positive work values. 16/

Without attempting to clarify directions of causation between work attitudes and work behavior, it is nonetheless of interest to note that women attached to the labor force in both 1967 and 1972 were generally much more likely to shift toward more positive attitudes. A comparison of women who were working in 1967 and 1972 with those who were not working at either time indicated in particular that the percentage of women who felt it was "all right" to work even if their husband disagreed, increased sharply for both black and white women at all ages (see Table 13). In addition, the results for both attitude items, for the employed and not employed, are generally consistent with the notion that more positive attitudes toward work may be found among the younger women.

The 1967-1972 comparison for the above attitude items in Tables 12 and 12a indicate a definite secular shift toward more positive work attitudes over the half decade. Table 14 presents the results of a wider series of work role items that have also been asked of both the younger and the older women's cohorts, but to date for only one point in time. These cross-sectional results provide some further clarification regarding variations in attitudes toward work roles in 1972 for two generations of women covering a 30 year span from age 18 to age 49. Indeed, by comparing work role attitudes of women 18 to 23 and 45 to 49 years old, one is essentially comparing the attitudes of two successive generations of American women. Most of the attitude items suggest that younger women have more positive attitudes regarding their ability to combine the home and market work roles. Most of the items with the greatest age discrepancy are

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16/ A similar trend may be noted for women 20 to 24 in 1968 and 1972 for the young women's cohort in Table 12a. There are no clear age trends on these attitude items between the younger and the mature women's cohort. On the other hand, there has been little change between 1967 and 1972 in the percentages of husbands with a favorable attitude toward their wives' working. For both blacks and whites in 1967 and 1972, the percentage giving a favorable response is about 56. See Herbert S. Parnes et al., Dual Careers, vol. 4 (December 1975), pp. 13-15.

Table 12a. PERCENTAGE AGREEING WITH SPECIFIED WORK ROLE ATTITUDES IN 1968 AND 1972, BY RACE AND AGE IN 1968: YOUNG WOMEN'S COHORT[1]

Race and age in 1968	1968			1972		
	Number of respondents	Okay to work if husband agrees	Okay to work even if husband disagrees	Number of respondents	Okay to work if husband agrees	Okay to work even if husband disagrees
Whites	3,173	66.7	12.4	3,157	82.3	25.0
14-19	1,829	67.7	12.4	1,819	80.8	24.4
20-24	1,344	65.1	12.4	1,338	84.5	26.0
Blacks	1,254	82.3	19.0	1,247	92.3	29.4
14-19	818	83.1	20.0	815	92.1	29.3
20-24	436	80.9	17.5	432	92.6	29.6

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[1] Sample limited to women interviewed in 1968 and 1972.

Table 13. PERCENTAGE AGREEING WITH SPECIFIED WORK ROLE ATTITUDES IN 1972 BY EMPLOYMENT STATUS IN 1967 (1968)[1/] AND 1972, RACE AND AGE IN 1972[2/]

Age in 1972	Okay to work if husband agrees				Okay to work even if husband disagrees			
	Number of respondents	Employed 1967 (1968) and 1972	Number of respondents	Not employed 1967 (1968) and 1972	Number of respondents	Employed 1967 (1968) and 1972	Number of respondents	Not employed 1967 (1968) and 1972
Whites								
18-23	399	82.7	590	80.0	398	26.0	590	22.6
24-28	444	82.1	380	83.9	444	28.3	381	20.2
35-39	309	89.4	366	82.4	310	29.0	366	16.7
40-44	337	86.5	327	83.2	336	27.5	327	12.5
45-49	426	80.7	386	75.6	426	20.7	386	17.2
Blacks								
18-23	118	94.3	375	92.4	118	40.4	375	26.5
24-28	151	96.0	131	93.6	151	28.3	131	30.2
35-39	138	85.5	85	88.8	138	38.2	84	25.2
40-44	182	93.4	92	71.1	182	35.0	92	16.7
45-49	200	81.8	91	84.2	200	28.3	91	12.9

[1/] For women age 18 to 28, the appropriate survey year is 1968. For women age 35 to 49, the appropriate survey year is 1967.

[2/] For women age 18 to 28, the sample is limited to women interviewed in 1968 and 1972. For women age 35 to 49, the sample is limited to women interviewed all survey years.

Table 14. PERCENTAGE AGREEING WITH SPECIFIED WORK OR FAMILY ROLE ATTITUDES IN 1972, BY RACE AND AGE[1]

Race and age	Number of respondents	Modern conveniences permit a wife to work without neglecting family	Woman's place is in the home	Job provides wife with interesting outside contacts	Wife who carries out her full family responsibilities doesn't have time for outside employment	Working wife feels more useful than one who does not work	The employment of wives leads to more juvenile delinquency	Working wives help to raise the general standard of living	Working wives lose interest in their homes and families	Employment of both parents is necessary to keep up with the high cost of living
Whites										
18-23	1,819	69.3	33.5	92.3	27.4	46.9	24.8	81.5	11.5	47.3
24-28	1,339	62.1	40.3	89.2	31.2	41.3	29.4	80.4	14.1	48.8
35-39	952	59.5	42.8	88.5	37.8	45.2	40.7	79.9	16.5	57.2
40-44	933	61.9	44.8	88.7	36.6	50.8	42.7	83.8	19.2	60.8
45-49	1,070	62.6	45.9	87.5	41.5	49.5	51.1	82.1	23.2	65.0
Blacks										
18-23	815	80.8	28.5	86.2	27.4	61.4	20.0	88.9	8.2	75.9
24-28	431	76.9	35.5	82.1	33.5	61.8	23.3	88.1	9.5	81.7
35-39	328	76.0	46.2	80.4	45.3	59.1	41.9	89.2	16.3	84.9
40-44	360	75.4	49.9	78.7	47.2	67.1	40.8	85.7	18.8	81.7
45-49	390	77.4	48.7	76.9	51.4	68.9	49.1	87.5	24.1	83.7

[1] For women age 18 to 28, sample is limited to those interviewed in 1968 and 1972. For women age 35 to 49, the sample is limited to those interviewed all survey years.

noneconomically based. In particular, young women are much less likely to believe that (1) employment leads to juvenile delinquency; (2) wives with family responsibilities don't have time for outside employment; (3) a woman's place is in the home; and (4) working wives lose interest in their family. The item most closely associated with general economic circumstances (working wives help raise the general standard of living) shows no variation by age, as both younger and older women show strong agreement with the statement.

However, older white women were significantly more likely than younger white women to feel that the employment of both parents is necessary to keep up with the high cost of living. This undoubtedly reflects a greater awareness of economic realities. This item and possibly the one stating that "working wives feel more useful" are the only two of the nine where the older women have attitudes more positively correlated with likely work activity than do the younger women.

If all of the above attitude variations do reflect secular variations in work attitudes, it is expected that the younger women will have higher levels of work activity than will their older counterparts in the years ahead. To the extent that these attitude shifts reflect only the aging process, the above statement would not necessarily be true. Subsequent survey rounds that include repetitions of these attitude items will help to clarify these tentative predictions.

While many of the attitude items in Table 14 show similar racial patterns, there are indeed several important differences in the level of the responses. On a number of items the black responses are more positive. In particular, as might be expected, black women feel much more strongly than do white women that the employment of both parents is necessary to keep up with the high cost of living. In addition, black women are much more likely to feel that a working wife feels more useful than does one who does not work.

It is of some interest to note that much of the racial discrepancy for these attitudinal items reflects differences between black and white women who are not working. As may be noted in Table 14a, black and white employed women are both quite likely to feel that "employment of both parents is necessary" and "working wives feel more useful" (although even here, black

Table 14a. PERCENTAGE OF WOMEN 35 TO 49 YEARS OF AGE AGREEING WITH SPECIFIED WORK OR FAMILY ROLE ATTITUDES IN 1972 BY RACE AND EMPLOYMENT STATUS

	Employed		Not employed		Black - white differential	
	White	Black	White	Black	Employed	Not employed
Modern conveniences permit work without neglecting family	69.0 (1619)	79.5 (665)	52.4 (1386)	70.7 (445)	+10.5	+18.3
Woman's place is in home	34.3	41.9	56.7	59.4	+ 7.6	+ 2.7
Job provides wife with interesting outside contacts	92.7	82.1	82.9	72.4	-10.6	-10.5
Wife who carries out her full family responsibilities doesn't have time for outside employment	26.9	41.6	52.8	59.4	+14.7	+ 6.6
Working wife feels more useful than one who does not work	60.3	70.1	34.7	56.7	+ 9.8	+22.0
The employment of wives leads to more juvenile delinquency	35.6	38.3	56.3	53.9	+ 2.7	- 2.4
Working wives help to raise the general standard of living	88.3	90.6	74.5	81.9	+ 2.3	+ 7.4
Working wives lose interest in their homes and families	12.8	13.8	28.1	30.2	+ 1.0	+ 2.1
Employment of both parents is necessary to keep up with the high cost of living	74.4	86.1	45.5	78.5	+11.7	+33.0

responses are somewhat more positive). However, when one examines the responses of the not-employed women, almost 80 percent of black women feel "employment of both parents is necessary," compared with less than half of the white women. Also, about 55 percent of the black women not employed think "working wives feel more useful," compared with about 35 percent for white women who are not working.

These results are certainly consistent with the idea that there is a substantial proportion of the nonworking female black population that sees the need for meaningful remunerative employment but for whatever the reasons, is currently unable to meet that need.

Further evidence of the complex manner in which home and work roles may be associated with both secular change and the aging process per se may be noted in Table 15. This table describes the extent to which married women between the ages of 21 and 51 with husbands present, share various home activities with others. These data, available only from the 1974 survey of mature women and the 1975 survey of young women, are presented both for all women in the sample and for women who were employed on that survey date.

Generally speaking, cooking, washing dishes, cleaning house, and washing clothes are household tasks for which the wife appears to be most likely to have sole responsibility during the early years of marriage. After the age of 30, there is some reduction in the proportion of women having sole responsibility for these tasks; but then increases in sole responsibility are evidenced once again as the married woman approaches the post-child-raising period. It may well be that the pattern of heavier responsibility by the wife in the early marriage years is simply a reflection of the fact that she is more likely to be in the home a greater proportion of the time because she has young children. As the children age and her probability of employment increases, the necessity for others to share home responsibilities with her increases. At the upper end of the age spectrum, we may be witnessing a secular phenomenon, as women of that generation may always have been more likely to assume sole responsibility for household tasks. The major exception to this pattern was child care responsibilities that declined with

Table 15. PERCENTAGE OF RESPONDENTS WITH SOLE RESPONSIBILITY FOR SELECTED HOUSEHOLD TASKS IN 1974 (1975)1/ BY RACE AND AGE2/

Race and age	Number of respondents	Grocery shopping	Child3/ care	Cooking	Cleaning dishes	Cleaning house	Washing clothes	Yard and home maintenance
	All respondents							
Whites								
21-26	1,107	56.5	39.6	74.1	65.7	65.8	80.5	9.9
27-31	1,012	67.8	41.4	76.7	65.7	67.8	84.3	11.0
37-41	816	74.4	44.3	72.3	45.0	52.1	77.4	7.3
42-46	795	71.5	35.7	75.8	54.7	59.3	81.5	9.0
47-51	881	62.2	20.7	78.0	59.2	63.8	81.2	9.6
Blacks								
21-26	287	45.8	35.5	73.9	63.1	58.2	70.7	17.0
27-31	224	61.8	46.1	71.7	55.9	65.2	82.1	12.1
37-41	182	53.9	37.2	56.3	36.5	36.5	56.7	6.5
42-46	227	60.5	30.6	68.6	34.8	41.7	57.1	7.6
47-51	236	60.9	17.5	72.7	52.1	60.0	68.4	9.4
	Employed respondents							
Whites								
21-26	618	51.6	20.1	66.6	55.7	55.0	75.2	6.0
27-31	462	64.5	24.2	65.8	54.0	53.9	74.2	8.2
37-41	432	69.0	30.8	63.9	38.7	43.7	69.6	5.2
42-46	436	70.6	27.4	67.3	49.1	52.2	77.1	6.2
47-51	442	58.6	12.2	69.6	53.0	58.2	76.1	8.9
Blacks								
21-26	155	45.1	24.0	69.1	54.5	45.4	64.0	11.2
27-31	132	65.5	35.4	64.2	52.7	59.7	78.7	7.8
37-41	113	55.8	31.8	53.5	31.3	28.9	54.4	4.3
42-46	140	64.6	21.6	64.5	27.9	35.0	51.4	6.5
47-51	139	62.8	9.5	72.1	51.1	60.9	70.8	5.5

1/For women age 21 to 31, the appropriate survey year is 1975. For women age 37 to 51, the appropriate survey year is 1974. Questions asked only of women who were married with spouse present.

2/For women age 21 to 31, the sample is limited to those interviewed in 1968 and 1975. For women age 37 to 51, the sample is limited to those interviewed all survey years.

3/Includes family units which do not have children in the home.

increasing age, reflecting the reduced need for this kind of assistance among the older women. Also, black women were usually more likely to share family responsibilities than were white women. The same age and racial patterns were evidenced for working women in the sample.

In general, the women in the labor force shared family responsibilities to a greater extent than did nonworkers. 17/ However, while sole responsibility for various holsehold tasks was lower for the employed, the differences were often somewhat marginal. In most instances, a working woman still maintained sole responsibility for most home tasks. This was true for both older and younger women and for both races.

SUMMARY AND CONCLUSIONS

The data presented in this paper suggest a number of trends that in some instances are consistent with each other and in other instances somewhat divergent. For the most part, behavioral and attitudinal trends exhibited by white women were consistent. Over the five year, 1967 to 1972, period, the level of labor force participation and the likelihood of being employed full time increased for white women. Although part of this trend reflected aging per se and its concomitant effect on child-raising, a major portion of the trend was secular in nature, as women with specific demographic characteristics increased their work attachment. Women within all marital status categories showed significant increases in participation levels. This partly reflected the lower proportion of women at a given age and in a given marital status category who had preschool children in 1972, compared with 1967. Consistent with this increase in participation levels and in average hours worked per week, mean real earnings for white women

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17/ Harriet Presser's findings are similar in that she finds black husbands share more household tasks than do white husbands. Husbands of women who were in the labor force share more household tasks than do those whose wives were not in the labor force. See Harriet Presser, "Female Employment and the Division of Labor Within the Home: A Longitudinal Perspective," a paper presented at the Annual Meetings of the Population Association, St. Louis, 1977.

increased over the period. Part of the increase in real family income for white families in this age range between 1967 and 1972 reflected these increased real earnings of white wives. However, white wives' earnings as a percentage of family income increased only marginally, from about 13 to 15 percent, during the five years under investigation. Not surprisingly, there were parallel secular shifts toward more positive attitudes regarding white wives' working during the half decade.

The black patterns were not as internally consistent. On an age-specific basis, black labor force participation rates declined significantly between 1967 and 1972 even though they, as with the white women, evidenced major secular declines in the proportion with pre-school-age children. The most dramatic declines in participation were witnessed by those women who were separated or divorced. These women not only showed a sharp decline in probability of participation but also were less likely to work full time in 1972 if they did work.

However, the black working woman made impressive gains in real earnings over the half decade. The most significant gains were evidenced by black women working full time year-round. Much of the growth in real black family income between 1966 and 1971 reflected this improvement by black working wives who contribute, on average, about 25 percent of their families' income.

As with the white women, black women showed overall shifts toward more positive work attitudes, but not to the extent that white women did, since black women in 1967 had already evidenced higher levels of commitment to the joint work-family role.

In summary, while white women generally increased their participation levels over the half decade, black women decreased theirs. Since black labor force participation levels were higher than white levels (on an age- and marital-status-specific basis) at the beginning of the five year period, the net result was a major convergence in rates between the races over the period. This convergence was evidenced in its most extreme form for women who were separated or divorced. In 1967, black women in this category had labor force rates well above those of their white counterparts. By 1972 the white rates were significantly higher.

A comparison of CPS labor force levels with NLS levels indicates a much greater convergence with our data set. The explanation for this convergence cannot be found in this limited overview, but may be partly related to the differential ability of black and white women at these ages to command market wages significantly above the income levels that they can accrue from various federal income transfer programs. 18/

If we focus more specifically on those women who are employed, black employed women greatly improved their earnings position vis à vis their white employed counterparts between 1966 and 1971. The absolute annual earnings advantage of white working women declined from over $700 to under $300. This relative improvement was most dramatic among women who were employed year-round full time. This positive finding must, however, be tempered by one caveat that may be related to the earlier cited declines in black labor market participation during the period. To the extent that the decline in black labor force rates represented a "selecting out" process whereby the black women with the least earnings potential were most likely to leave the labor force, the major increase in real earnings for the nonleavers becomes less surprising.

It was noted that whereas work attitudes of white working women were much more positive than were the attitudes of their nonworking counterparts, the same was not as universally true for the black women; black women not at work felt as strongly that work was necessary on two key attitude items as did working black women. All of the above findings suggest (admittedly somewhat impressionistically) that there may well be a large latent pool of black women available and desiring to work if the proper conditions for employment existed and if, at least in some instances,

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18/ Ross and Sawhill in their book, Time of Transition, point out that between 1960 and 1970, welfare benefits have been rising relative to market earnings. Between 1960 and 1970, the average payment per recipient in the AFDC program increased 75 percent, while the mean earnings of wage and salaried workers increased by 48 percent. See Heather L. Ross and Isabel V. Sawhill, Time of Transition, Washington, D. C., The Urban Institute, 1975, pp. 98-101.

appropriate guidance, skill training, and other socioeconomic assistance were made available. The enormous discrepancy among black women between actual patterns of work participation and apparent positive feelings regarding the economic and psychological need for work are, to say the least, disquieting.

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APPENDIX

A NOTE ON NLS-CPS COMPARISONS

For a number of reasons, some of which are known and some of which are uncertain, there can be systematic as well as random differences between the NLS and CPS data sets. First, there can be variations between the two data sets due to sampling variability. Second, it has generally been established that NLS labor force participation rates are systematically higher than CPS rates. Most of the difference between the two rates lies in greater reporting of part-time and overtime employment by NLS respondents. There also is some evidence of more extensive reporting of unemployment experiences by NLS responses. Much of the above differences probably reflect the fact that in the NLS respondents are always reporting for themselves whereas in the CPS, there are many instances where someone else reports information about the respondent of interest. Also, it is possible that the repeated annual interviews with the NLS respondents "condition" the respondents to report labor force experiences to a greater extent than is true in the CPS.

Also, with regard to this specific paper, it should be recalled that most of the tables are limited to respondents who were interviewed in all survey years in order to maximize comparability across years. This procedure could also have a minor effect on labor force and employment levels since the sample stayers were on average of slightly higher socioeconomic status than the leavers. However, given the low attrition (14 percent over six interviews), this is not a significant problem. All of the above factors contribute to the differences between NLS and CPS reported work activity already briefly noted on pages 30 and 32 and Table 4. These differences are most prevalent for the data reported in Tables 2, 3, and 5.

There also are some differences in reported income estimates between the CPS and NLS which as of this date cannot be fully explained. They may reflect differences in who is reporting the income as well as seasonal variation in retrospective recall for income earned the preceding year. CPS-NLS differences in this regard are most pronounced in Table 11.

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RESEARCH USES OF THE NATIONAL LONGITUDINAL SURVEY DATA ON MATURE WOMEN

by

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INTRODUCTION

Our report on the research uses of the data gathered on mature women from the National Longitudinal Survey (NLS) of Labor Market Experience has several purposes. First, we provide a comprehensive survey of the research that has utilized the panel data on the cohort of mature women. 1/ Second, we compare the research done with the content of the surveys in order to identify neglected research opportunities. Third, we form judgments with respect to the direction of future research based on the NLS data on mature women.

In July 1977 we began to collect published articles identified in the NLS Handbook and Newsletter. We also solicited published and unpublished papers, by means of letters sent to all users of NLS data, as identified from the Handbook and Newsletter and from the Department of Labor's list of projects funded by the Office of Research and Development. In addition, Herbert S. Parnes provided us with published and unpublished papers prepared by the staff of the Center for Human Resource Research (CHRR) at The Ohio State University. Our report on the uses of the data on mature women is revised and expanded from our review of research on all four NLS cohorts: young men, young women, mature women, and

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1/ Specifically, the mature women cohort consists of women aged 30 to 44 in 1967. Respondents will have been interviewed or surveyed by telephone in eight of the years between 1967 and 1977. See The National Longitudinal Survey Handbook (Center for Human Resource Research, The Ohio State University, 1976) for further details. (Rather than reproduce material presented in the Handbook, we refer the reader less familiar with the NLS to that document.)

older men (Bielby, Hawley, and Bills, 1977). We focus more strongly on research published or forthcoming in professional journals and books than on the "in house" research of the CHRR staff. Much of the latter appears in the widely distributed Dual Careers monograph series (also see Andrisani et al., 1977), and some of the major findings have been summarized by Sexton (1977, especially pp. 13-18).

We begin our report with two sections organized around the major substantive areas of labor market research: labor supply and labor demand. After surveying and evaluating NLS-based research in these areas, we present a smaller section that summarizes an important methodological innovation developed by users of the NLS data on mature women. Then we present our judgments on neglected topics in the research and in the data, and conclude with our observations on future research utilizing the NLS data on mature women. 2/

THE LABOR SUPPLY OF WOMEN

Fifteen years ago the determinants of male and female labor supply were thought to be well understood. For males, the secular decline in hours of work was seen as resulting from the income effects of rising wages dominating the substitution effects, thus causing the male labor supply curve to be backward bending (Lewis, 1956). 3/ For females, increasing labor force

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2/ Note that there are two lists of references for this report: citations to NLS-based research and citations to other publications.

3/ The substitution effect is the change in the demand for leisure induced by a change in its cost (the wage rate), holding income (or utility) constant. A rise in wages increases the cost of leisure and thus induces hours of market work. The income effect is the wage-constant change in hours of leisure induced by a change in income. For "normal" goods, like leisure, incomes and quantities demand move in the same direction. Thus, the explanation for males is that income effects have swamped substitution effects, so that labor supplied is inversely related to own wage.

participation in the face of a rising standard of living was at first seen as an anomaly. But this apparent anomaly was soon resolved by Mincer (1962) when he placed female labor supply in a family context and focused on both female wages and other family income as determinants of the decision to work. Mincer showed that expected declines in the labor force participation of married women due to a husband's rising income (income effect) were more than offset by the positive effect of rising wages for women on a wife's decision to work (substitution effect).

With Mincer's research came a sharper focus on the alternatives to wives' employment: leisure and housework. The decision to work depends not only on wages (market productivity) but also on home productivity. The latter is directly related to family composition--the number and ages of children in the household. Cain (1966), and Bowen and Finegan (1969) not only confirm that the rise in female wages is the driving force behind the great increases in female labor force participation, but just as important, they confirm that for married women, family composition plays an extremely important role in the decision to work. The presence of children, especially young children, was repeatedly found to have a large negative impact on the labor supply of married women.

New theoretical developments (Becker, 1965; Lancaster, 1966) stressed the allocation of time between home and market in producing ultimate satisfactions for family members. Child care is hypothesized to be a female time-intensive activity, especially when children are young. The well-established inverse relationship between number of children present and female labor supply suggested that the desired levels of both of these are joint outcomes of a common set of socioeconomic variables. In short, the fertility decision and the decision to work are interdependent. This insight has produced new research on fertility and its determinants (Schultz, 1974).

In recent years there has been an explosion of labor supply research. The impetus came from many directions at once. The family model of labor supply allowed more rigorous testing of hypotheses. Continuing policy debates over the effects of income maintenance programs were behind much of the research. The difficulties in interpreting the results of the New Jersey and other income maintenance experiments have resulted in a greater concern for the issues of estimation and have highlighted some of the deficiencies of a family labor supply model that suppresses dynamic considerations (Greenberg, 1972). The following issues have been raised by this flood of research:

1. The endogeneity of certain "independent" variables, such as assets (Fleisher, Parsons, and Porter, 1971; Smith, 1976); work experience (Mincer and Polachek, 1974; Sandell and Shapiro, 1976); and family composition (Schultz, 1974).

2. The importance of jointness in wage-hours choices (Rosen, 1976b).

3. The process of human capital accumulation within the household (Benham, 1974); and home investments in children (Leibowitz, 1974; Hill and Stafford, 1974; Fleisher, 1977).

4. Efficient and unbiased estimation of the labor supply function itself (Heckman, 1974b; Cogan, 1975).

The research discussed below deals with some of these issues and presents different approaches. Since all of the studies use the Parnes data on mature women, they have the virtue of using the individual or the family as the unit of analysis rather than some larger aggregate (for example, SMSA), which was characteristic of much of the research undertaken in the 1960s. Furthermore, the longitudinal nature of the data allows the investigator to examine labor supply in a life cycle context.' Researchers usually measure labor supply by annual hours or weeks worked; the Parnes data permit measures of labor supply over longer time intervals.

Household Decision Making and Female Labor Supply

Interest in female labor force participation over the life cycle has led to careful examination of women's work attachment in the interval between the leaving of school and first birth versus labor force attachment after the birth of a first child. Using as his measure of labor force participation the number of years in which the respondent worked at least six months of the year, Sandell (1977) estimates separate labor supply functions for each of those periods for a sample of mothers, spouse present. He confirms that rising female wages have had a positive impact on married women's labor force participation, and like Mincer, shows that female labor force participation is greater, _ceteris paribus_, when husband's current income is temporarily below his permanent income, where the latter is proxied by husband's education. He also finds that in the postbirth period the substitution effect of wages on labor supply declines substantially when certain attitudinal variables and prechild job experience are included as independent variables. Prechild job experience, a favorable attitude toward mothers working, and a perceived favorable attitude of the husband toward the respondent's working all have positive effects on female labor supply. Sookon Kim (19[illegible]b) also finds evidence that permissive attitudes toward the propriety of mothers' working have a significant effect on married women's labor force participation. The interpretation of attitudinal variables requires some care. Presumably, they represent an orientation toward the market. Considering them as "taste" variables cannot place the decision to work outside of an opportunity cost context. Thus, either these variables capture differences in self-chosen home production functions or they reflect rewards to working that cannot be captured by an own-wage variable alone.

Rosenberg (1972) uses the mature female sample to investigate the relationship between fertility, family composition, and labor force participation. He focuses on four family composition variables, besides the traditional wage and income variables, to predict current labor force participation: (1) age of mother; (2) age of mother at first birth; (3) number of children ever born; and (4) age of youngest child. All variables except wife's age have independent effects. The thrust of this research is that great increases in female labor force participation in the past have largely been due to changes in household composition, with the independent effects of wages on participation playing a smaller role.

Fleisher (1977) matches the surveys of mature women with those of the young men to create a mother-son sample, investigating the relationship between the mother's home time and education, on the one hand, to the son's future educational attainment, intelligence, and early labor market success, on the other. His framework is a three-equation recursive model in which son's IQ, educational attainment, and wages are dependent variables, time-determined in the above order. While he finds little relationship between mother's home time to son's schooling, Fleisher believes that he has found evidence that mother's education interacts with her home time to produce greater child quality as measured by either son's educational attainment or his wages in the labor market.

A great deal of recent research on the labor supply of married women and its relationship to fertility behavior has been done within the "Chicago" framework of family labor supply, or as it is called by its practitioners, the new home economics (Schultz, 1974). The model shows the interrelationship between the demand for children (who are viewed as consumer durables) and the demand for market goods. In its most sophisticated form, the commodity "children" is taken to have two dimensions, quality and quantity, and household purchases occur up to both margins (Becker and Lewis, 1973; DeTray, 1973; Willis, 1973).

Of the papers using the NLS data, the one that is most faithful to this approach is Fleisher and Rhodes's "A Multiple Equation Family Model" (1977). Their model consists of four simultaneous equations in which the dependent variables are wife's wage rate, work experience, and number and quality of children. Exogenous variables include husband and wife's education, her age and race, and his wage rate at age 40. For their measure of the wife's opportunity cost of her time, Fleisher and Rhodes choose the median wages of the occupation in which she worked the longest. To index child quality they use the child's wages as gleaned from the young men or young women surveys.

The authors estimate the model in both linear and log-linear forms and find that the linear model is the preferred specification. Many of their results are similar to conclusions that have been reached by means of simpler approaches: being black hurts one's wages;

schooling pays a positive gross return; an increase in wife's earning power reduces the demand for children. One curious result is that husband's wage is strongly and directly related to wife's wage. The authors posit a job-search theoretical explanation of this, but alternatives include shared human capital, marriage selection, or a within-family "old boy" network. Their most surprising result is a positive influence of number of children on the labor force participation of married women. While we question the robustness of this result, their paper represents a first foray into simultaneous structural estimates of fertility and female labor force participation behavior, using National Longitudinal Survey data. 4/

Kniesner (1976) is interested in a single parameter of the family labor supply model: the cross-substitution effect between one's hours of work and spouse's wage rate. In the past, most estimates of the income effect on married women's hours of work supplied have been based on the coefficient of other family income (mostly husband's income). This presumes that husband's earnings are a given; that his wage has no effect on the supply of her labor, nor does her wage have any effect on the allocation of his time between the household and the market. Using data from the first interview of the older men and mature women, Kniesner finds evidence that own hours of work and spouse's wage rate are positively related. Hence, for this sample, hours of market work of each spouse are also positively related and thus own time is complementary with spouse's time. It is obvious that this relationship is unlikely to be uniform over the life cycle. We need other stage-of-life estimates of the cross-substitution effect. Not only would they be valuable in and of themselves, but they are important parameters for public policy issues, since total labor supply effects must be known in order to estimate the costs of income maintenance programs.

One limitation of the Chicago model of family labor supply is its static nature. As such, the wage rates of each spouse are formally taken to be exogenous. In practice, to overcome the suppression

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4/ See Cain and Dooley (1976) for simultaneous equation estimates of wages, labor supply, and fertility, based on 1970 Census data.

of dynamic considerations, a wage rate equation for each spouse is commonly estimated on the basis of his or her education and work history. But the causation between work histories and wages for women is a difficult one to decipher. Do women withdraw from the labor market because of the low expected wages from participation, or is low participation the cause of their low expected wages? This is the concern of both Mincer and Polachek (1974) and Sandell and Shapiro (1976). Each of these papers is reviewed in our section on sex discrimination.

In another paper assessing the direction of this causation, Sandell and Shapiro (1977) suggest it is likely that the cohort of young women surveyed substantially underestimate their future labor force attachment. Much of their conclusion is based on the responses of the young women cohort to whether they expected to be working at age 35. They show, for all race-education categories, that when surveyed in 1968, the young females' expected labor force participation rates at age 35 were well below those participation rates that were currently experienced by women 35 years old in the mature women sample. Economic theory suggests that those women who expect to have greater labor force attachment will have steeper wage-experience profiles with a smaller constant term than do those women who do not have such expectations because of the greater incentive to invest in on-the-job training. By using the survey response to expected labor force participation at age 35 as an interaction term, Sandell and Shapiro estimate human capital wage functions for the young women and find that their results are consistent with their derivations from economic theory. Their test is also interpreted as validating the survey instrument. However, one could argue that there is an inherent trade-off between validation of a theory and validation of an instrument; a single empirical test cannot do both. Finally, the authors present evidence from later surveys that young women seem to be adjusting upward their labor participation expectations. This is not exclusively an artifact of the aging of that cohort. High school seniors in 1973 and college seniors in 1973, for example, expected larger rates of participation at age 35 than did their counterparts in 1971 and 1968.

Child Care and Welfare

Richard L. Shortlidge and Patricia Brito (1977) analyze how working women with children under 14 deal with child care responsibilities. As their data base, they use the 1971 mature female sample and the 1971 young female sample. Both contain responses to an extensive child care questionnaire administered that year. Much of their analysis consists of cross-tabulations that highlight the use of various forms of child care (family, nonfamily, inside home, outside home) by age of children, wage rate and hours worked of mother, mother's education, and other variables. In addition, with the use of multiple classification analysis, they relate the use of family or nonfamily day care to household composition, job characteristics of working mothers, personal characteristics, and geographic location. Their most interesting result is that both women's earnings and their education are positively related to use of nonfamily child care after other factors, such as household composition and availability of relatives in the community of residence, are controlled for. They also provide estimates of the cost of child care per hour worked of the mother. Cost outlays averaged 37¢ per hour worked for children under 3, 27¢ per hour for children 3-5, or between 15 and 20 percent of working women's wages. For children of school age the cost was much smaller.

This study provides valuable information on what consumption bundles working women choose, but it is unable to overcome the simultaneity of supply and demand in order to disentangle the determinants of that choice. The restriction of the sample to working women gives us no estimates of how the presence of children forms barriers to labor market entry for nonworking women (but see Heckman, 1974a; 1974b; 1976).

In a related study, Shortlidge, Waite, and Suter (1975) compare the 1971 NLS mature female survey of child care arrangements with a 1965 CPS survey (Low and Spindler, 1968). They document the still small but increasing reliance of working women on group day care centers for their children, as within-home substitutes become increasingly unavailable or prohibitively expensive. The greatest increase in utilization of group centers comes from nonwhite women with preschool children, and this is most likely due to federal programs aimed at that population. The authors also discuss increased suburbanization, increased female labor force participation, and changes in the female occupational structure as factors responsible for the secular change in child care arrangements.

While Shortlidge and his coauthors have documented the kinds of child care used among employed women, Heckman (1974a) is interested in the labor supply effects of programs that lower the cost of formal child care arrangements: in particular, under what conditions will currently nonworking mothers work? Will working mothers work more hours? Or for most mothers will there be no effect on hours of work, as informal sources such as older siblings or relatives continue to be used?

To answer these questions Heckman argues that he needs to know three things: (1) What determines the cost of children? (2) What determines the wages women require to work in the marketplace? (3) What determines the marginal rate of substitution between market work and home production? Knowing the determinants of these three factors allows Heckman to estimate the impact of work-related child care subsidies on labor supply.

Heckman uses the 1967 mature female sample, restricting his analysis to those women with spouse present and at least one child under 10. For both blacks and whites he finds that child care costs are inversely related to the presence of a relative or older sibling in the home and length of residence for those living within an SMSA; and positively related to husband's hours of work and residence within an SMSA. To estimate the asking wage function, Heckman relies on a statistical procedure that he developed for a previous paper (1974b). This procedure allows use of the entire sample of working and nonworking women (both groups were asked about child care) rather than estimating the determinants of the wages for which working women are willing to work. The latter procedure, common until Heckman's 1974 paper, is vulnerable to sample selection bias. For both blacks and whites, their asking wages are positively related to their years of education and labor market experience.

To estimate the marginal rate of substitution, Heckman relies on the same procedure to yield estimates of the slope of an indifference curve up to a second order approximation. The estimated slope, or marginal rate of substitution, is a function of the number and ages of children present (categorized 0-3, 4-6, 7-10), as well as wife's education, income, assets, and current hours of work.

A complete summary of Heckman's estimates of the labor supply effects of child care payments that are tied to work is beyond the scope of this paper. In fact, the results seem subordinate to the innovative approach to the direct measurement of the slope of an indifference curve and the statistical procedure employed to take advantage of the data on child care preferences of nonworking women. Nevertheless, Heckman does find cases in which child care subsidy offers tied to work would have positive labor supply effects and reduce net government welfare costs.

Two other studies of welfare and female labor supply are by Meyer (1975) and Shea (1973). Both use the 1967 mature female survey to examine the relationship between welfare benefits and the willingness to work, but their approaches differ. Choosing as his sample working women who would have been eligible for assistance under the now defunct Family Assistance Plan (FAP), Meyer estimates labor supply functions for black and white women. For both groups he finds that net wages (net of foregone FAP benefits) have no significant effect on hours of work, as income and substitution effects seem to balance out. Instead, respondent's education and job experience, self-reported health status, and the presence or absence of preschool children are the major determinants of annual hours of work supplied.

Shea takes as his sample women out of the labor force. All were asked whether they would accept a job if it were in their area, and respondents who indicated interest were asked a series of questions, one of which was their wage requirement. Responses were consistent with the women's past labor force participation. Those who had greater previous market experience were most willing to return to work if a job was available. Using multiple regression analysis, Shea analyzes the determinants of the willingness to accept the hypothetical offer and for those interested, the determinants of their asking wage. His results indicated that current receipt of welfare benefits slightly lowered the propensity to work for whites and raised the asking wage less than 25¢ for both groups.

Though FAP is dead, the relation between labor supply and public assistance, well-studied in the past, is likely to continue to be a research issue for many years to come.

Rosen (1976a, 1976b) is also interested in labor supply at the wage margin. Since married females are likely to be secondary earners, their first dollar earned is taxed at the same marginal rate as their spouse's last dollar. Using the 1967 mature female survey data, Rosen tests a model that estimates the tax perception for white wives. Consistent with his derivations from economic theory, his results indicate that labor supply is responsive to net wages rather than gross wages.

Marital Instability

A utility-maximizing approach to understanding the social behavior of the individual over his or her entire life cycle seems to be the ultimate goal of the "new home economics." Becker (1973, 1974) has used this principle to develop a theory of marriage in terms of the expected costs and benefits to each party of such a union. The new home economics takes the union as given to predict the demand for children and the allocation of time to household and market work on the basis of nonlabor income and each spouse's household and market productivities. A complete, well-integrated theory of family formation and the allocation of time to investment, home, and market activities is far from sight at this stage. Nevertheless, economists have recently begun to bring their expertise to the subject of divorce and separation.

Research in this vein using the NLS data are papers and a dissertation by Cherlin (1976a, 1976b, 1977) and a paper by Kniesner (1976). Cherlin's most recent research is reported in a paper in this volume. Among his conclusions are that wife's relative wage, number of children, and large age differences between spouses are positively related to divorce or separation, while the presence of young children is negatively related to marital instability.

In a similar analysis that uses the mature women surveys, Kniesner (1976) finds that, ceteris paribus, families with many children and low levels of assets are more likely to experience divorce or separation. He also fails to detect an independent effect of race on marital dissolution.

The above research suggests that the relationship between the probability of marital instability and children is a complex one. The presence of young children does seem to delay and perhaps inhibit divorce or separation. Becker, Landes, and Michael (1977) report similar findings in their analysis of SEO data. They also note that while families with more children may experience divorce or separation more frequently than do families with fewer children, it does not follow that families with no children have lower divorce rates than families with children. Indeed, they do not. Furthermore, they show that the relationships of the number, presence, and ages of children to marital dissolution probabilities change with the length of marriage. Thus the NLS-based analyses of marital instability by Cherlin and Knieser should be interpreted with caution. Their analyses are confined to the older female cohort, and as such tell us at most only the determinants of marital dissolution for women in their thirties or middle forties who had a spouse present at some time during this period.

Bahr (undated, a) looks at some determinants of marital instability for all four NLS cohorts. He finds that net assets have a significantly positive effect on marital stability in all four cohorts. In another paper (undated, b) that analyzes only the young women sample, Bahr finds that the importance of assets differs according to when the union was formed. He finds that for those who married in their teens, net assets' positive influence on marital stability was absent. Unlike Kniesner, he finds significant racial differentials in the probability of marriage dissolution. A major deficiency in both of Bahr's papers, however, is a lack of attention to other variables that may be causally related to marital instability, in particular, family composition and female wages.

Quantitative research on marital instability from an explicit net-benefits-from-dissolution perspective is still in its infancy. 5/ While some microeconomic variables, such as wife's wage, have shown consistent (and in this case, positive) effects on marital instability, the amount of variance explained by commonly used variables is very small, especially when the population analyzed is fairly homogenous with respect to stage in the life cycle (age).

As the above summary shows, the potential for understanding women's allocation of time between household and market activities has been richly exploited using the NLS data on mature women. If we may offer a single criticism, it is that an excess of attention has been given to the labor allocation of married women to the neglect of the social forces that operate on single women. In this respect we are unaware of any research using the NLS data that has as its aim predicting marriage formation on the basis of Becker's or any other theory of marriage, although it is possible that such research is currently underway. Furthermore, while we have not really dealt with the determinants of educational attainment in this section and instead leave that topic to other sections below, we feel that the postsecondary educational attainment of women is an aspect of life-cycle behavior that is still only vaguely understood. Research that delineates the multiple motivations behind such educational acquisition should be part of the social science agenda of the 1980s.

5/ Another study of marital instability from this perspective is Chapter 3 of Ross and Sawhill (1975), which contains an analysis of the University of Michigan's Panel Study of Income Dynamics data.

LABOR DEMAND

Survey data on the socioeconomic attributes of individuals seem ideally suited for research on labor supply, labor force participation, and human capital or status attainment models of individual socioeconomic success. As we have seen, the NLS data on mature women have provided the basis for considerable "normal science" research in those areas. In recent years, however, the appropriate representation of "demand" or "structural" determinants of social processes have been debated by social scientists. "Dual" and "segmented" labor market theories have offered explanations of socioeconomic inequality that focus on institutional barriers to neoclassical market mechanisms (Doeringer and Piore, 1971; Edwards, Reich, and Gordon, 1975; Thurow, 1975). Radical and Marxian theories have introduced interest group conflict, class domination, and exploitation into models of socioeconomic inequality (Gordon, 1972; Bowles and Gintis, 1975; Bonacich, 1976; Wright and Perrone, 1977). These approaches often stress the importance of attributes of jobs and their hierarchical arrangement in occupational structure.

Applied to the different labor market outcome of men and women, the "demand" or "structural" theories suggest that employer behavior and the distribution of job opportunities condition family decision making and the occupational choices of women (Blau and Jusenius, 1976). Direct tests of many aspects of these theories require data not attainable from representative social surveys of individuals: for example, attributes of industries, the social and technical organization of work, and actions of employers. However, microsurvey data have been used to indirectly test hypotheses derived from these theories, and occasionally such data have been combined imaginatively with other sources of information (for example, published characteristics of firms or industries) to obtain more direct tests.

For example, according to dual labor market theory, women and minority groups are often confined to the "secondary" job sector, where workers obtain lower wages, have less opportunity for career advancement, and receive lower returns for their productive capabilities. The resulting discrimination against disadvantaged groups is typically assessed with microdata by decomposing group differences in socioeconomic success into three components: a portion due to differential individual human capital endowments and other predetermined personal characteristics; a portion due to discrimination from differential returns to those characteristics; and a residual differential representing direct discrimination. (Of course, the same procedure is also used to assess group disadvantages within a neoclassical model incorporating employer or employee "tastes" for discrimination.) Directly stratifying a sample of individuals into labor market sectors on the basis of occupation or industry can provide a somewhat more direct test of dual or segmented hypotheses. 6/ Both strategies have been employed with NLS data. Finally, of course, intergenerational and intragenerational occupational immobility predicted by demand or structural hypotheses can be directly tested with microsurvey data.

Sex Discrimination in the Labor Market

The notion that discrimination channels women into occupations where they receive lower wages, have fewer opportunities for advancement, and receive lower return on their human capital investments, has been presented as an alternative to neoclassical human capital explanations for sexual differences in labor market experiences. The NLS data on mature women have been used as evidence to support both of the opposing views. Polachek (1976, 1977; Mincer and Polachek, 1974) has relied on the detailed labor force experience measures in the 1967 NLS mature women data to support his contention that sex differences in the labor market are largely due to the intermittency of female labor force participation and the lower postschooling human capital investments of women. Polachek argues further

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6/ However, see Cain (1976, pp. 1245-47) for a discussion of the potential biases that can result when a sample is stratified on an endogenous variable. A further problem is that there is virtually no consensus on how to operationalize labor market sector.

that occupational segregation by sex is a consequence of a rational choice by women who expect to experience interruption in their labor force participation. These women choose to enter occupations characterized by less "atrophy"--depreciation of human capital that occurs during interruptions.

Sandell and Shapiro (1976) point out an apparent misspecification in the Mincer and Polachek (1974) paper (concerning the treatment of general versus specific training and the endogeneity of time spent at home), and find that the human capital depreciation due to time spent at home had been substantially overstated. Consequently, according to Sandell and Shapiro, sex discrimination plays a much larger role in the earnings gap, with perhaps a fourth of the gap attributable to the differential labor market experience of males and females.

Jusenius (1976) confronts more directly the human capital explanations of Polachek and others, specifying a wage model for NLS mature women (1972 data) stratified into three occupational segments according to skill level. [7] (Skill level was computed from the Dictionary of Occupational Titles "Specific Vocational Preparation" rating matched to three-digit census occupation codes.) She found that the higher the skill stratum, the higher the returns on education and on recent and long-term experience, and the lower the disadvantage to a woman in a female-sex-typed occupation. Women in the lowest strata are disadvantaged both in human capital endowments and returns on those endowments. These results are presented to show that labor market segmentation as defined by both skill level and occupational segregation by sex results in economic disadvantage to women over and above that due to discontinuous labor force participation.

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[7] See Rosenfeld (1976) for a conceptualization and analysis from a perspective intermediate between Polachek and Sandell and Shapiro. She argues that intermittent experience and lower investment in human capital interact with structural barriers that inhibit the occupational advancement of women.

Although not as substantively focused as the above studies, Suter and Miller (1973) published one of the first studies using NLS data to examine sex discrimination in the labor market. They compare earnings functions for four groups:

1. NLS women aged 30 to 44 in 1967.
2. NLS "career women" (worked at least six months in three-fourths of the years since leaving school).
3. All men aged 30 to 44 in the March 1967 Current Population Survey.
4. Black men aged 30 to 44 in the March 1967 CPS.

They find that education, occupational status, and work experience explain more variation in income for women than for men. More specifically, there is less variation in income among women of the same education, occupational status, and experience than there is for men who are equivalent on the same attributes. Women receive lower returns on education and occupational status. Thirty-eight percent of the overall gap between mean income for men and women remains after controlling for education, experience, and occupational status. Their analysis is largely descriptive and does not directly address the competing explanations of labor market outcomes for women.

In a replication and extension of the study by Suter and Miller, Treiman and Terrell (1975) compare status attainment models of education and occupational prestige for working 30 to 44 year old NLS women to similar models for men aged 30 to 44 in the 1962 Occupational Changes in a Generation Survey (Blau and Duncan, 1967). They find the distribution of occupational prestige and years of schooling to be nearly identical for men and women, and the processes of attaining these outcomes quite similar (except for a tendency for attainments to be more influenced by the socioeconomic origins of the parent of the same sex). However, their research neither speaks to the different career choices, expectations, and aspirations young men and women make while in school, nor addresses occupational segregation by sex as manifest in intrafirm authority structures and internal labor markets.

Treiman and Terrell compare earnings functions for working NLS women and their husbands. Working white wives earn 42 percent as much as their husbands, working black wives, 54 percent. White working women obtain a return on years of schooling only one-fourth as large as do their husbands, and returns on occupational status about three-fourths as large as do their husbands. If the mean attributes of white husbands are applied to the equation for wives, the overall earnings gap is reduced by less than one-half. However, they note that much of the differential return and residual gap could be attributable to family contingencies and choices made within a household decision-making framework.

When the earnings functions of black working wives and their husbands are compared, the differences are not nearly so large as those detected for whites. Working black wives receive nearly the same return on education and hours usually worked as do their husbands, and actually receive a slightly higher return on occupational status. Differential endowments account for only about one-third of the overall wage gap between working black wives and their husbands. Treiman and Terrell note that overall, the earnings functions of both black wives and husbands fall about midway between those of white wives and their husbands. They suggest that white wives appear to exercise the most discretion over whether to become committed to labor market or family activities. White husbands are totally committed to the labor market and are rewarded for their investments in human capital. Black husbands and wives, possibly because of economic necessity, overt discrimination, and different family decision-making processes, find themselves in an intermediate position. While these are simply speculations, they point to the interdependence of human capital investment processes, family decision making, and demand considerations of labor market segmentation, the structure of work, and employer behavior in explaining the different economic experiences of blacks and whites, men and women, in the contemporary United States.

The study by Treiman and Terrell suggests that black and white mature women have qualitatively different labor market experiences. Hudis (1977) and Mincer and Polachek (1974), also using the 1967 data, replicate the finding that black women receive greater returns on education. However, working black women acquire less education, are in lower status jobs, and earn less on average than do white women. Consequently, "only those few black women who have managed to surmount their problems of background and discrimination and acquire an occupation equal to that of the average woman attain comparable income" (Treiman and Terrell, 1975, p. 192). Hudis (1977) presents evidence that suggests that the greater returns on education and occupational status occur primarily among black women with more labor market experience. Of course, the greater "return" on education and occupation among black women could be interpreted in the opposite direction--a black woman with one less year of education or one less unit of occupational status is disadvantaged more than is a comparable white woman. Black women applying for better paying jobs may be more closely screened with respect to education and occupation than are white women.

Intergenerational Mobility of Women

The influence of social origins on the socioeconomic success of women has received little attention over the past ten years. One reason for the scarcity of research on the intergenerational mobility of women is that there exist few data sets that are appropriate for such research. Perhaps more important, sociologists have been reluctant to address the conceptual problems of incorporating family decision-making processes and the structure of job opportunities for women into models of mobility.

Among the few studies that examine the occupational mobility of women are two, primarily descriptive, that use the NLS data on mature women. Tyree and Treas (1974) use 1967 data to replace their findings on "marital mobility" obtained from other data. They find that the marital mobility patterns of women (from parental head of household's occupation to husband's occupation) are more similar to the intergenerational occupational mobility patterns of men than they are to the mobility patterns of women. Men and women differ more in their respective occupational destinations than in their destinations in marriage, and "about twice as many working women would have to change jobs as wives would have to change husbands for the two sexes to have the same mobility matrices" (p. 300). Rosenfeld (forthcoming) uses the same data to show that mother's occupation as well as father's occupation influences the mobility patterns of women. While both studies suggest role-modeling and occupational segregation as underlying mechanisms, neither is incorporated into the analyses.

Labor Demand and Structural Factors--Further Considerations

Several "demand" or "structural" perspectives are virtually absent among research based upon the NLS. Hardly any research focused *explicitly* on job competition, queuing mechanisms for rationing jobs, 8/ screening, and signaling processes. While screening-type hypotheses are admittedly difficult to test (Lazear, 1977; Cain, 1976), some explicit conceptual models have been proposed (Spence, 1973; Starrett, 1976), and Thurow (1975) suggests how queuing processes and "statistical discrimination" result in labor market disadvantages for women. Since the NLS data contain considerable information on the process whereby individuals search for and acquire jobs (at least from the employee's side of the transaction), they could provide an opportunity for a major empirical contribution to research in this area.

Issues of labor supply and labor demand intersect in the areas of unemployment, job separation, and job search. The two recessions of the last seven years and high rates of unemployment experienced in times of high aggregate demand have stimulated considerable empirical research about the nature of unemployment and its relation to levels of unemployment benefits. But little of this research has focused upon the unemployment experience of women. Indeed, the research has yet to contribute significantly to our understanding of unemployment among men, and the conceptual and methodological complications introduced by more frequent entrance and exit from the labor force among

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8/ Exceptions include two largely descriptive papers on job rationing (Furstenberg and Thrall, 1975; Thrall and Furstenberg, 1975).

women makes successful modeling of female unemployment seem intractable at present. Nevertheless, Sandell (1977) and Furstenberg and Thrall (1975) use NLS data on mature women in two exploratory attempts to come to grips with this issue.

Unfortunately, the somewhat unique information on unionization in the NLS data on mature women has yet to be utilized. Many widely used surveys provide no information on unionization (for example, the censuses and Current Population Surveys), while others simply provide an indicator of labor union membership. But since 1971, the NLS data on mature women provide: (1) whether earnings are set by a collective bargaining agreement; (2) whether the respondent is a member of the union; and (3) the type of union that negotiates the agreement. However, effectively exploiting the unionization data for mature women may be difficult. In assessing the effects of unionization from micro-survey data, there often exists an implicit assumption of historical equilibrium. This is particularly problematic for the kinds of jobs typically held by women. For example, white collar public sector jobs may have recently become unionized because of low wages, and the resulting market impact of union formation may not yet be fully established. In contrast, many private sector industrial unions may be far past that stage. In the blue collar private sector, we are more likely to be observing wage differentials that exist because of unions. While earnings functions incorporating this dynamic dimension of unionization might be considerably more complex, they would also be more convincing. Efforts in this direction could then exploit the longitudinal nature of the NLS to examine the effects of unionization on changes over time in wages and other job-related rewards.

Finally, we know very little about the processes by which women are recruited into or excluded from positions of authority. Access to authority hierarchies should have a central place in a comprehensive structural explanation of sex discrimination, yet no information on authority position is collected in the NLS. We hope this situation changes for future waves of the surveys.

METHODOLOGICAL RESEARCH ON SUBSAMPLE SELECTIVITY BIAS

NLS data on mature women have been used in the exposition of recently developed techniques for assessing the effects of subsample selectivity bias in estimating models of labor market processes. A problem encountered in the estimation of labor supply and wage equations for women is that no wage is observed for nonworking women. Heckman (1974b; 1976; see also 1974a) develops a procedure that allows estimation of an equation for the probability that a woman works, her labor supply function, her (offered) wage function, and the asking wage for a woman who does not work. He estimates a model for white, married-spouse present NLS mature women (1967 data) and compares his results to conventional estimates based on the subsample of working women. The latter estimates in the 1974 paper appear to understate the effect of young children on labor supply (asking wage) and also understate the effects of experience and schooling on (offered) wages. The more recent paper corrects results for a coding error in the original analysis and uses some alternative estimation techniques. The wage equation is only minimally affected by sample selectivity, but the supply equation appears to be greatly affected by it. (Cogan, 1975, uses the same data to extend the comparison to two other techniques, Tobit and OLS technique for imputing wages for nonworking women.)

The procedure introduced by Heckman can be generalized to any situation where the probability of subsample selection depends on a parametric function of individual attributes exceeding a threshold value and where an endogenous variable of interest cannot be observed for individuals not in the subsample. Heckman's version of the procedure involves two steps. First, a probit equation for the probability of selection into the subsample is estimated, and for each observation, a single selectivity bias parameter is estimated. Second, the function for the endogenous variable is estimated, with the estimated adjustment parameter included among the right-hand variables.

Fligstein and Wolf (see their paper in this volume) apply Heckman's technique to the same NLS data in order to examine whether accounting for selection into the subpopulation of working women alters the finding that occupational attainment equations of men and women are quite similar. They hypothesize that women who do not work cannot find jobs commensurate with their training and background, and consequently ignoring those women ignores a part of the process of attainment that differs for men and women. However, they find that subsample selection had only minimal effects.

Although the technique for assessing subsample selectivity bias generalizes to any specification that is of the form described above, 9/ Heckman's exposition within the substantive context of a household decision-making model is particularly important for analyzing the labor market experiences of women. Failure to account for the effects of selecting on the decision to enter the labor force is a potential problem in virtually all existing research on the socioeconomic attainments of women. It is to be hoped that the availability of this methodological technique substantively grounded in a theory of household decision making will receive more attention from those doing research on the labor market experiences of women.

UTILIZATION OF THE NLS DATA ON MATURE WOMEN

Clearly, the longitudinal nature of the NLS data need to be more fully exploited. The longitudinal aspect has not been overlooked for lack of appropriate substantive conceptualization; life-cycle and developmental perspectives are central to economic, sociological, and psychological theories of individual labor market behavior. Rather we seem to lack (or be unaware of) the appropriate methodologies to analyze panel data. Perhaps we have become too comfortable interpreting cross-sectional differences among individuals as confirmation of longitudinal processes. An obvious

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9/ Griliches, Hall, and Hausman (1977) extend the technique to examine selectivity and simultaneity bias in a three-equation model of the decision to remain in school, years of schooling, and wages. Their empirical application uses the NLS data on young men.

example is the interpretation we give to the differences in economic success among individuals with different amounts of labor market experience. We hope that the current availability of NLS data with observations at six points in time, coupled with the increased sophistication of structural equation representations of our theories, will provide the incentive for the application of longitudinal analyses.

Of course, utilization of specific variables depends on the substantive context of the analysis. For example, given the analytically powerful human capital perspective, information on schooling, ability, experience, and wages goes a long way. Human capital models have been expanded to incorporate training other than schooling, labor market information, and socioeconomic origins, and they have been empirically tested with NLS data. Similarly, variables relevant to family decision making have been well exploited in studies of household labor supply. Surprisingly though, detailed information quite relevant to contemporary economic and sociological theories of labor market behavior has been virtually ignored. We have seen in analyses that use the expanded information on health available for the mature women cohort beginning in 1971, yet physical health (and its change over time) would seem to be a crucial factor in determining the depreciation of human capital. Nor have we seen any analysis of determinants of individual or household demand for health.

The cohort of mature women ages seven years in the currently available data for the years 1967 to 1974. Yet little research has been done on aging as a developmental process, despite the longitudinal information on economic, physical, and social psychological well-being. Other items that have received little attention are future job plans and the detailed information on financial assets. 10/

10/ Furthermore, we have not come across a single analysis of the mature women data that uses the item, collected from 1967 through 1972, whether the family purchased a garbage disposal in the previous year (and whether it was new or used).

The mature women cohort was selected because it was anticipated that it would have unique labor market problems in the 1960s and 1970s. While the extensive analyses conducted by the CHRR staff (especially the Dual Careers series) provide insights into the history of the cohort, there has been considerably less analysis of the social demography of the cohort from the perspective of other researchers. It appears that the social policy concerns that shaped the design of the NLS surveys have failed to motivate other academicians to integrate those concerns with their own research interests (although this is perhaps less true of the surveys of the cohorts of women than it is of the cohorts of men). Indeed, many of the neglected content areas seem to reflect the substantive and policy concerns of CHRR as sold to the funding agencies, and vice versa. We agree that these areas have important implications for manpower and other social policy issues. Unfortunately, social scientists working within specific and well-developed research paradigms may not have the insight, incentive, or even ability to incorporate those areas into their own empirical research.

THE NLS DATA--SOME NEGLECTED CONSIDERATIONS

As noted above, straightforward analysis of issues in labor demand and sex discrimination utilizing social survey data on individuals is often difficult. This certainly applies to the NLS data. Information on job characteristics and the work setting is required in order to examine how individuals get access to jobs and then move up within firm job ladders and authority hierarchies. While explicating just what data should be obtained from individuals is problematic, the NLS data does seem particularly deficient in certain respects. Longitudinal data on promotions, supervisory responsibilities, job autonomy, and decision-making capacities would certainly render some predictions of dual or segmented labor market theory empirically testable. Furthermore, such data might allow an empirical assessment of the degree to which occupational segregation by sex is attributable to individual occupational choice as opposed to employer and/or employee decisions.

Even in research areas that are well defined and adequately covered by the NLS, some questionnaire items are at variance with corresponding substantive concepts. A particularly important example is the assessment of labor market experience. The measure of general labor market experience prior to the initial survey for the cohort of mature women has some undesirable properties. Respondents reported the number of years in which they worked at least six months. If total weeks of experience is the appropriate indicator, then the NLS item will tend to have errors that are positively correlated with true experience. For example, women who consistently work between 27 and 51 weeks will have their experience overstated (since they will be attributed a full year of experience), while those who consistently work between 1 and 25 weeks per year will have theirs understated (since they will be attributed zero weeks of experience). Although the implications are not as serious, the measure of employer-specific experience (job tenure) of first job after completing schooling for mature women is measured differently according to marital status and presence of children, and is measured differently from that obtained for the other three cohorts. 11/

Finally, a comprehensive review of the reliability of the most important and most frequently used measures would be a valuable resource to users of the NLS data. The data have been analyzed by many researchers over a span of nearly seven years, yet we have at best only impressionistic notions of the reliability of even the most basic items, such as years of schooling, job experience, and income.

FUTURE RESEARCH WITH THE NLS DATA ON MATURE WOMEN

What will be the research issues of the 1980s? There are two related aspects to the answer: substantive issues and policy issues. One of the most important substantive issues for the 1980s, in our view, is the

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11/ For young men and women and mature men, tenure at first job is for the first job after schooling that was held for at least one month. For never-married mature women with no children, it is first job held at least six months. For ever-married mature women and never-married mature women with children, it is not assessed.

family. Research addressing the developing social forces affecting the family requires a greater understanding of its internal decision-making processes with respect to labor supply, allocation of resources, composition, and dissolution. Related policy issues are public assistance, child care, and educational policy.

Another important substantive issue is institutional constraints on the demand for labor. Occupational segregation and labor market discrimination by race and sex, and the matching of individuals to jobs, are still only vaguely understood by social scientists. Related policy issues are affirmative action, corporate promotion policies, unemployment, and the creation of public sector jobs.

Underlying the issues noted above are the social demography of successive cohorts over time, technological change, and the institutional responses to these developments. The National Longitudinal Surveys of labor market experience provide vital information on all of these issues, as shown in this review of research based largely on just the first five years of panel data.

It would be presumptuous of us to prescribe the research that our colleagues should undertake in the next decade. We have tried, however, to provide some coherence to an extensive body of research, and we hope that the unifying themes will be kept in mind as each of us goes on to pursue his or her next technical report. Finally, we would like to see social scientists give greater consideration to adopting the NLS in their empirical research. Data-processing problems of CHRR and the Census Bureau that were characteristic of the early stages of the surveys seem to have been overcome. Those problems have contributed to a reluctance of many social scientists to utilize the NLS data. It is our impression that past data-processing problems have given the NLS an undeserved "bad rap" among many sociologists and economists. We hope this report contributes to alleviating that reputation.

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DISCUSSANT REMARKS

by

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Because I have fewer comments on the Mott paper, I shall begin with it. Consistent with its objectives, the paper presents a broad-brush overview of the major socioeconomic variables that are likely to be of interest to social scientists and policymakers alike. The descriptive cross-tabulations should be useful as the starting points for more in-depth analyses of some of the issues that Mott raises. Particularly valuable are the heretofore unpublished intergenerational comparisons of attitudes of young and mature women. However, the latter data and their interpretation provide an example of one shortcoming of the paper, namely that the author occasionally draws inferences that are not fully or uniquely supported by the tabular data. For example, there seems to be a plausible alternative to Mott's explanation of the finding that mature women are more likely than young women to feel that employment of both parents is necessary to keep up with the high cost of living. The response pattern may reflect a recognition by the young women of the relatively greater earning potential of their better-educated husbands. This would also provide a consistent explanation of the observed racial difference in response.

The second comment on the Mott paper is technical, but not unimportant. By limiting attention to women interviewed in all of the survey years, the author does not resolve the problem of nonrandom attrition, as is suggested in a footnote. Rather, the problem is simply ignored and may be camouflaged. Indeed, if attrition from the sample were positively correlated with, say, family size, then some of the inferred secular change in fertility may be exaggerated. Finally, examination of behavioral change over the period 1967-1972 seems to be incomplete insofar as it is discussed solely in terms of aging and secular shifts in behavior of particular age cohorts, without any reference to the changed economic circumstances within which the behavior occurred.

There are several reasons that it is difficult for me to be critical of the Hawley-Bielby review paper. First of all, they partially disarm me by acknowledging on their cover page my helpful comments on an earlier version. Second, I think that they have done a remarkable job of distilling and synthesizing a vast body of research. Third, I find myself in general agreement with most of the conclusions that they offer. Not withstanding all of that, I interpret the responsibility of a discussant as a mandate to identify flaws or gaps in the paper, rather than to restate the points with which I agree.

One feature of the paper that I find troublesome is the order in which individual research studies are reviewed, within a topical heading. Studies are certainly not discussed in the chronological order of adjudged importance or significance. In addition, it is not clear what criteria were used in selecting which studies would be abstracted and critically evaluated, which studies would be merely abstracted, and which studies would be simply mentioned in passing. Surely, those studies that go uncriticized in the paper are not without fault and those whose existence is merely acknowledged deserve at least a brief description. This seems to me to be particularly problematical for those readers who are unfamiliar with the NLS-based research.

A related point in this vein is that there seems to be a sound reason for including, rather than excluding, some of what the authors call "in house" research from the Center for Human Resource Research at Ohio State. Specifically, what I have in mind is the set of multivariate analyses that comprise Dual Careers, volume 4. The justification for proposing inclusion of reviews of these studies is, very simply, their relevance to the issues addressed by Hawley and Bielby. For example, their review of work on occupational mobility and their discovery of a lack of research on job separations completely overlook two studies by Parnes and Nestel in the fourth volume of Dual Careers. 1/

1/ Paradoxically, the authors inappropriately include a lengthy review of the "in house" paper "Women's Incorrect Expectations and their Labor Market Consequences" by Sandell and Shapiro. The review seems inappropriate here because the focus of that paper is young, rather than mature, women.

Additional studies for which reviews are notably absent, although the studies are cited in the list of references, are the following: Paul Andrisani's 1976 paper on interfirm mobility; Sue G. Ross's work on the relationship between fertility and labor supply decisions; Louise Vetter's work on intragenerational occupational mobility; Steven McLaughlin's paper on sex discrimination in labor markets; and Victoria Lapham's work relating both to methodological studies based on the NLS data and to assets of mature women. Finally, there is a study prepared by KETRON, Inc., for the U. S. Department of Housing and Urban Development entitled Women in the Mortgage Market (U.S. G.P.O., 1976) that utilizes the NLS data on mature women to assess the stability of women's income. 2/

Another significant omission in the Hawley-Bielby paper comes under the heading of what we have learned from research using these data. That is, the authors overlook the several pieces of evidence attesting to the persistence of racial discrimination among women in the labor market. Although there is certainly evidence to argue that a black woman's sex is a greater constraint on her achievement of socioeconomic success than is her race, the NLS-based research on mature women consistently indicates the need for continued efforts to combat racial discrimination in labor markets. It seems that the significance of this cannot be overemphasized in view of the widely accepted generalization that much of the relative economic improvement experienced by black Americans in the 1960s and early 1970s was due to advances by black women in the labor market.

Finally, I think that Hawley and Bielby are too modest in claiming that they have not prescribed at least part of the agenda for future research using the NLS data on mature women. Indeed, they have done so by identifying some of the gaps in the existing body of research. To conclude these comments on their paper, I offer the following additional items to the list of topics that need further research. First, there is a great need to know more about how the labor market decisions and experiences of women are affected by the business cycle. The NLS data are particularly well

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2/ It may be of interest to conferees that a study of women, trade unionism, and discrimination is currently in process at the U. S. Commission on Civil Rights.

suited for research in this area. For example, aggregate data indicate that at least in terms of the measured unemployment rates, women workers suffer relatively less than do men during recessions. That is, quite apart from the secularly widening gap between the unemployment rates of men and women, since World War II the overall unemployment rate of women has risen less than that of men during recession. 3/ Reasons for this phenomenon have been offered by Mincer 4/ and have been disputed by Ferber and Lowry,5/ among others. To my knowledge, microdata such as the NLS have not been used in the debate.

Second, from the standpoint of understanding and forecasting secular changes in the operations of labor markets, there is a need for more research comparing the experiences of the two NLS cohorts of women, even though they do not represent two entirely separate generations. Some first steps in this direction are obviously represented by the Mott and the Macke-Hudis-Larrick papers prepared for this conference.

Third, extending a suggestion made by Hawley and Bielby, there is a need for methodological studies of the reliability, or at least the consistency, of information provided by members of the same household. This seems particularly crucial, since a mature female is usually the respondent in CPS interviews and certainly is consistent with Secretary Marshall's suggestion that research can inform policy by increasing our confidence in our quantifications of labor market behavior.

3/ Bureau of Labor Statistics, Handbook of Labor Statistics 1975-Reference Edition, BLS Bulletin No. 1865, Washington, D. C., U. S. Government Printing Office, 1975, pp. 148-49.

4/ Jacob Mincer, "Labor Force Participation and Unemployment," Prosperity and Unemployment, edited by R. A. Gordon and M. S. Gordon, New York, John Wiley & Sons, 1966.

5/ Myra A. Ferber and H. M. Lowry, "Women: The New Reserve Army of the Unemployed," Women and the Workplace, edited by Martha Blaxall and Barbara Reagan, Chicago, University of Chicago Press, 1976.

Finally, there is an important issue that seems to have been largely overlooked by researchers using the NLS data and by Hawley and Bielby. That is an analysis of the economics of travel to (and from) work. The potential policy implications of this issue clearly cross over the jurisdictional lines of the Department of Labor to include national policies on housing and public transportation. While this doubtless is important for all workers, it seems especially relevant to understanding the time allocation decisions of women to the extent that they continue to be relatively more likely to be part-time labor market participants.

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DISCUSSANT REMARKS

by

Carol L. Jusenius
The Ohio State University

My comments today focus largely on areas of future research for which the NLS data are particularly well suited. In part, this emphasis stems from the complete documentation of past research that we have seen reviewed in the Hawley-Bielby paper. In part, it also stems from my own personal enthusiasm regarding the possible uses of the NLS in attempts to understand some of the problems women face today.

Before beginning the discussion, however, I would like to make a few observations about the cohort itself and the data presented in Frank Mott's paper.

As Mott noted at the outset of his paper, during the lives of this group of women dramatic changes have occurred in society's attitudes toward "appropriate" roles for women. The oldest age group experienced the Depression during their preteen and teenage years. World War II occurred during the teenage years of the middle age group of women, and finally, the youngest women were teenagers during the immediate postwar period. Thus, the total cohort grew up and made decisions regarding education, marriage, and children during years when (with the exception of World War II) most of society believed that "a woman's place is in the home."

Given this historical perspective, I find the data on the women's attitudes toward "working women" to be powerful indicators of the changes that have occurred among women--and perhaps within society as well. For example, according to Mott, in 1967 approximately 13 percent of the white women and 24 percent of the black women believed that it was acceptable for a woman with children ages 6 to 12 years to work even if her husband disagreed. By 1972, these figures had risen to about 20 percent among whites and to about 30 percent among blacks. I find the other attitudinal data that Mott presents to be equally dramatic evidence of the changes (and the rapidity of the changes) occurring in women's views of themselves and other women.

Nevertheless, while these women's attitudes toward "appropriate" roles for women appear to have undergone substantial alterations since they were teenagers, fewer changes seem to have occurred in the roles themselves. True, women are taking on increasing responsibility in the labor force, but they appear to be retaining their responsibilities in the home as well. Mott's data on the rather high percentages of employed women who also have primary responsibility for household tasks bears witness to this phenomenon. The title of the volumes produced on this cohort--Dual Careers--seems all too appropriate.

My comments on future research for which the NLS is particularly well suited are organized around several policy-oriented issues: earnings, unemployment, and training. This selection reflects my own areas of interest and to some extent my familiarity with the data. By no means do I consider the list all-encompassing.

Earnings

As identified in the Hawley-Bielby paper, the NLS has been used to address several issues regarding the sources of the male/female earnings' differential. Many, if not most, of these studies have used the NLS as a cross-sectional data base. Now, with the longer period of coverage, some of the time-series aspects of the data become important. The usefulness of this particular characteristic to the study of women's earnings' position is best illustrated if we refer briefly to previous research in the area.

Thus far, research on the male/female earnings' gap has had to rely on cross-sectional data. With such data we measure, say today, the earnings gap experienced by women of various ages, say 20, 30, and 40 years. However, as is well known, it is dangerous to give such a curve a life-cycle interpretation. That is, we cannot automatically infer that women who today are 20 years old will follow the earnings path taken by women who today are 60 years old. Through the cross-sectional analysis we have only obtained a snapshot of different age cohorts of women--each at the age they are today. If it is true that attitudes and opportunities have changed over time, then each age cohort, or vintage, of women is likely to have followed a different earnings' path. More precisely, each vintage of women is likely to have a different *age-earnings profile.*

As an example, suppose we find today that young women at the beginning of their careers have earnings parity with their male counterparts, but women who today are 60 earn two-thirds the earnings of men with equivalent experience, education, etc. If we give the data a life-cycle interpretation, we are saying that we expect that women who today have earnings' parity will experience over their lives a continuously eroding relative earnings position. And, one set of public policies is implied.

Yet there is another possible explanation of the data, and by implication, possibly a second set of appropriate public policies. If we allow for differentiation among age cohorts, then a life-cycle interpretation is no longer obvious. Instead, it becomes reasonable to suggest that women who today are 60 years old have earned 60 percent of what their male counterparts have earned throughout their careers. Given that women's opportunities for education and promotion were very different even ten years ago, this interpretation of the data is not entirely implausible. The point is that the relative earnings' position of one vintage at a particular age is not necessarily indicative of the earnings position of another vintage when it is that same age.

Clearly then, a "clean" interpretation of cross-sectional data is less straightforward than has been suggested by the frequently observed life-cycle interpretation in the literature. Fortunately, the NLS data provide us with a means for disentangling these alternative explanations. It is possible to differentiate between vintages of women and the aging process of each vintage. The data base has measures of earnings by age over time, making it possible to construct age-earnings profiles for women of different ages. Thus, we can track, both across age cohorts and over time, the influence that economic and socioeconomic factors have on women's earnings' position.

Unemployment

Turning next to unemployment, in contrast to the measures of earnings, relatively little use has been made of the unemployment variables--either in cross-sectional or in longitudinal analyses, either as dependent or as independent variables. There is much to be learned about the structure of women's unemployment, and the NLS has much to contribute.

Research in this area is currently proceeding in several directions. One deals with the relationship among the duration of unemployment, the number of spells of unemployment, and the number of different persons who are unemployed at a given point in time. The issue here is that one set of policies may be appropriate for those who experience unemployment for only a brief period of time, and another set may be appropriate for those who either experience many unemployment spells of short duration or experience few spells, but of extended duration.

Unfortunately, these types of unemployment experiences cannot be easily differentiated. The same number of unemployed persons--or even unemployment rates--for two different groups may subsume great differences in the number of spells and the duration of spells being experienced. For example, white women may move with relative frequency between the employed and unemployed categories, but the duration of their unemployment may be brief. By contrast, black women may move with less frequency between the two categories, but once unemployed they may remain there for an extended period of time.

The point I wish to make is that these measures can be accessed in the NLS cohort of women. We may study women's movement into and out of unemployment and the duration and the number of spells of unemployment they experience. Further, by virtue of its longitudinal nature, the NLS permits analysis of the same phenomena at several points in time.

A few specific examples may serve to highlight the usefulness of the NLS in this context. During a downswing in the economy, are recent (re)entrants into the labor force likely to assume a disproportionate share of unemployment, perhaps because they lack seniority. In contrast, during an upswing, are older women likely to assume a disproportionate share of unemployment, due perhaps to age discrimination in hiring decisions?

Training

The final point I wish to make relates simply to the variables that document the type, source, and amount of training a woman takes. Given the federal government's interest in, and expenditures on, training programs, it seems imperative that we understand who among older women tend to take training and what the effect of such training is on their ability to obtain employment and high wages. Is training per se likely to help women move out of poverty? Is training likely to reduce the period of job search among women re-entering the labor force? Alternatively, is some particular type of training more likely to be effective in achieving these goals? Once again, these are simply examples of policy-related questions that have yet to be addressed with the older women's cohort.

In sum, I believe that the full potential of the NLS data on women has yet to be realized. Its importance as a data base for policy-oriented questions cannot be overestimated. The NLS has important and rather complete sets of economic and socioeconomic variables. In addition, by virtue of being longitudinal, these data permit us to ask questions and interpret results with a precision not possible with cross-sectional data.

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III. WORK AND FAMILY ROLES: CONFLICTS AND RESOLUTIONS

INTRODUCTORY REMARKS

by

Barbara A. Jones
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The impact of work on family roles is not a new topic of study for economists or sociologists, but recent increases in female work rates have kindled unprecedented interest and enthusiasm in researching the subject. Earlier works in this area can be grouped into four broad categories: the relationship between female labor force activity and marriage stability, fertility, education, and attitudes.

We have learned from these works, among other things, that there has been a positive relationship between wives' labor force activity and divorce; attitudes toward working wives are becoming more positive; blacks' attitudes toward wives' working are more positive than those of whites; the rate of change in attitudes is increasing; and there is a positive relationship between education and female labor force activity, as well as expectations of labor force activity and increases in education. But there are many questions yet unanswered and apparent inconsistencies in the findings from different studies. For example, we are still unsure about the nature of the effect of labor force activity on fertility and vice versa. And we are also unsure about the nature of the effect of the availability of various child care arrangements on a mother's decision to work outside the home. Obviously, there are myriad questions that researchers have yet to approach. 1/

Among the unanswered questions and unresolved issues we find questions about the impact of the labor force activity of the wife on the labor market behavior of the husband--his earnings, mobility, and job search activity; the impact of the teenage labor market experience on later behavior; and the impact of

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1/ The papers from this panel give specific references to the major works on the impact of female labor force activity on family roles.

participation patterns of mothers on the labor market decisions of their children. Of course, there is much more that we need to know about attitudes--what causes them as well as better ways of measuring them, and what are the patterns of change.

This change in female labor market activity must be viewed in the context of broader changes that are taking place, which together constitute what many believe will be viewed as a social revolution.

The revolution, if it turns out to be one, is in progress; thus the situation or pattern of relationships that are extant at any given point in time should not be viewed as the new order, but rather researchers must monitor these relationships to ascertain the direction of change. The NLS data will be particularly useful in tracking the time path of the revolution.

I will discuss three areas of study associated with female work activity that are in need of special attention: nonmarried women, black women, and income distribution.

Most studies of female labor force activity have concentrated on married women living with their spouses. This has remained so in spite of the obvious trend toward more female-headed households. The oversight is particularly serious among black women, where the proportion of women over 16 years of age living without spouses reached 35 percent in 1974.

Most studies of female labor force activity have been inadequate in dealing with problems of black women for other reasons as well. With few exceptions, insights into the behavior of black women have come from studies designed to study whites where a section near the end may speak to "racial differences." This approach to studying black women is no more appropriate than it would be if we were to design a study for white men and then plug the data for white women into the model and compare the results.

The experiences--economic, social, cultural, political--of black women have been different from those of white women. Black wives have participated in the labor force in large numbers since they were brought to the Americas, so the pattern of change being tracked for black women is significantly different.

An example of the shortcomings of using an approach designed to study white women to answer questions about black women is the NLS questions on attitudes toward work. The responding wives were asked:

> ...how do you feel about...a woman taking a full time job outside the home (under each of the following circumstances)?
>
> 1. If it is absolutely necessary to make ends meet.
>
> 2. If she wants to work and her husband agrees.
>
> 3. If she wants to work, even if her husband does not particularly like the idea.

These questions were designed for women for whom the matter of employment of wives was an issue. They are appropriate in the cultural setting where patterns are moving from the almost exclusively nonworking wife to half of all wives working, but they are inappropriate to measure attitudes in a culture where wives have always worked and there is no indication that the pattern is reversing. It is not surprising that Macke et al., using these questions, did not find any difference in attitudes between young black women in the labor force and those out of it. Perhaps greater insights would have been gained by asking black women, "Under what circumstances should wives not be employed?"

The final topic I will comment on is the impact of increased female labor force participation on the distribution of income. Women who work are generally better educated and can command higher salaries than their counterparts outside the labor force. In addition, these working women tend to be married to better-educated men who also are among the higher wage earners. Thus, increased female labor force participation leads to disproportionate increases in the incomes of higher-earning families, leading to an even more unequal distribution of income.

In a similar vein, we need to know more about the impact of increased female work rates on black male employment. A recent study of the National Commission for Manpower Policy found that among firms reporting to the EEOC, white women's employment in professional and managerial occupations is increasing far faster than that of black men and black women. 2/ We need to know more about these patterns.

Many questions relating to women as workers have obvious public policy implications. But before programs can be designed, decisions must be made regarding goals. Often means are confused with goals. For example, is marital stability a goal, or is the goal the elimination of poverty associated with households headed by women? What are the long-range goals of manpower programs--employment for the unemployed or training of workers for occupations in which there are labor shortages? If both, which has priority? These kinds of questions must be answered as a prerequisite to systematic program development.

Even with the uncertainty regarding goals, specific policy issues must be addressed, and research using the NLS data can be useful toward this end. Listed below are some such policy issues:

- What kinds of programs and policies will help solve family conflicts associated with two earners--for example, child care programs?
- How can a tax structure be designed for two-earner households that will be neutral in its impact on marriage and not discourage labor market activity of either males or females?
- How can economic assistance to poor families be provided without discouraging labor force participation?
- What kinds of programs are needed to reduce the impact of increased work rates among women on the distribution of income?

2/ See National Commission for Manpower Policy, The Economic Position of Black Americans: 1976, Special Report No. 9, Washington, D. C. (July 1976), pp. 28-29.

Obviously, this list is not exhaustive, but it makes the point that there are real problems that exist now or that will exist in the near future that further research of female labor market activity can help solve.

The papers for this session, "Work and Family Roles: Conflicts and Resolutions," address topics or problems we have alluded to. The first paper, "Sex-Role Attitudes and Employment Among Women: Dynamic Models of Change and Continuity," by Anne Macke, Paula Hudis, and Don Larrick, recognizes that attitudes are changing and attempts to track the path of those changes. The second and third papers are complementary. The one by Andrew Cherlin looks at the impact of labor market activity on marital dissolution; and Lois Shaw looks at the effect of marital dissolution on the economic status of the wives. The discussants for the panel are Linda Waite and Clair Vickery.

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SEX-ROLE ATTITUDES AND EMPLOYMENT AMONG WOMEN: DYNAMIC MODELS OF CONTINUITY AND CHANGE

by

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BACKGROUND

Studies of female labor market patterns have long claimed an important place in descriptions of the changing U. S. labor force and in sociological and economic research more generally. Recently these trends have also emerged as considerations in the development of government employment policy. Specifically, current discussions of programs designed to reduce unemployment acknowledge the importance of women's increasing presence in the labor force for the formulation of job programs (Shabecoff, 1977). Furthermore, the potential impact of changes in women's work patterns is not limited to short-run employment programs. Labor force projections by the U. S. Department of Labor in 1976 and by others (Waite, 1977) also recognize that work propensities of women of all ages and family stages have increased dramatically since World War II (Oppenheimer, 1970; Nye, 1974); and these trends form the basis of predicted labor force figures. As these projections have become increasingly sophisticated, some labor force analyses have gone beyond extrapolations from previous employment trends and incorporated various assumptions concerning the future course of U. S. fertility. However, other potentially important changes in women's lives have been given relatively little attention in the development of employment policy and labor force projections.

Most important among them is the well-documented change in women's sex-role attitudes over the last decade (Parelius, 1975; Mason et al., 1976). 1/

Increasing employment rates, especially among mothers of young children (Nye, 1974), certainly represent a departure from modal twentieth century patterns of family life, one that may reflect changing attitudes (Dowdall, 1974; Waite and Stolzenberg, 1976; Kim et al., 1973). Thus, the potential impact of sex-role attitudes on female labor force participation is a crucial issue for both the development of government policy aimed at accommodating women's increasing desire for employment, and the estimation of more accurate labor force projections.

Although some earlier researchers dismissed the need to incorporate attitudes in explanations of changing female labor force behavior (Bowen and Finegan, 1969), there is now substantial evidence that sex-role attitudes--particularly attitudes toward women's employment--and actual labor force behavior are linked. Experience with market work shapes women's tastes for alternatives to familial roles (Turchi, 1975; Scanzoni, 1975) and, consequently, should produce more favorable attitudes toward nontraditional life styles. Conversely, women with nontraditional orientations are more likely to anticipate future roles that include employment (Waite and Stolzenberg, 1976), to actually be employed, and to exhibit greater continuity of labor force participation (Kim et al., 1973; Spitze and Spaeth, 1976). These effects of attitudes on labor force behavior hold despite the fact that most young women still intend to withdraw from employment while their children are young (Macke and Morgan, 1978), a pattern followed by the majority of married women (Sweet, 1973; Suter and Miller, 1973).

Despite evidence of the correlation between nontraditional attitudes and greater employment propensities, the predominantly cross-sectional nature of this research has produced little understanding of the over-time dynamics of these relationships. Even those studies based on longitudinal data (Spitze and Spaeth, 1976; Waite, 1977) have not considered the

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1/ To our knowledge, only one very recent set of U. S. female labor force projections includes extrapolations from data on women's employment-related attitudes (see Waite, 1977).

potential temporal feedbacks between sex-role attitudes and labor force behavior. Our view is that prior attitudes affect subsequent employment, and that work experience shapes later sex-role attitudes. Consequently, early nontraditional sex-role ideologies may operate to trigger a spiraling pattern, whereby such attitudes influence early labor force behavior (as well as associated marital and childbearing decisions), which in turn further alters later attitudes and behavior. This feedback relationship may exist not only early in life, but may continue to affect women's employment decisions throughout their labor force careers. Consequently, even a relatively small short-run effect of early attitudes on labor force participation may be magnified through a long-term pattern of attitude changes inducing a greater desire for market work. 2/ Under these conditions, the accelerating attitude shifts observed by Mason et al. (1976) partly may be a function of increased propensities toward working over the past decade. From the perspective of policy development, evidence supporting a spiraling effect of sex-role attitudes on labor market behavior suggests the importance of incorporating attitudinal measures in the formulation and implementation of employment programs and the refinement of labor force projections. A further implication of such findings is the need to modify labor force projections for adolescents, socialized under conditions of changing sex-role norms, to include effects of unexpectedly large temporal shifts in employment-related attitudes.

Although younger women are most likely to support nontraditional life styles (Parelius, 1975; Welch, 1975), accurate forecasts of the impact of sex-role norms on work participation must consider older women as well. These women have also shifted their attitudes (Mason et al., 1976), and so may be responding similarly to their ideologies concerning women's employment. In addition, given their relative freedom from childbearing responsibilities, they may be even more likely than are younger women to display labor force patterns that conform to their sex-role beliefs. If so, participation rates may increase more rapidly than

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2/ Even given such a feedback relationship between attitudes and employment propensities, there is a likely ceiling on women's employment rates resulting from childbearing, less than optimal childcare arrangements, and the low wages some categories of women face that fail to compensate for the costs of childcare.

anticipated as successively less traditional women enter their middle years and experience an accelerated impact of attitudes on employment.

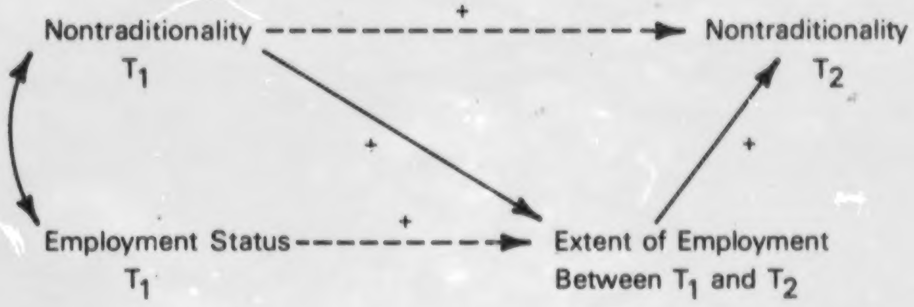
THE MODEL

Based on these observations, the analyses presented below test the hypothesis that prior sex-role attitudes influence subsequent labor force behavior, which, in turn, affects later sex-role attitudes. This argument is presented schematically in Figure 1. In this model, the dashed arrows represent controls for the temporal consistency of attitudes and employment, which might produce inflated estimates for the effects of substantive interest (Bohrnstedt, 1969).

We examine this series of relationships separately for younger and older women. By exploring possible differences in processes for various segments of the female population, we can more readily anticipate work patterns at different stages of the life cycle, suggesting at least short-run policy applications for the two groups. (That is, are younger or older women more likely to experience rapidly increasing labor force entry? Should current labor force projections incorporate attitudinal measures only for one or the other of these two categories of women?)

Blacks have long espoused a more work-oriented, instrumental role for wives (Axelson, 1970; Dietrich, 1975; Scanzoni, 1975). In addition, black husbands' lower current and permanent income (Sweet, 1973) and the greater probabilities of future marital disruption for black couples (Udry, 1966) more often necessitate wives' employment. Consequently, the propriety of wives' (or mothers') employment is often irrelevant to employment decisions (Farley and Hermalin, 1972; Hudis, 1977), even for those blacks who strongly disapprove of maternal employment. These subcultural experiences should increase employment rates among black wives, irrespective of their present economic situations or sex-role traditionality. Thus, the relationships described above between working and nontraditionality probably more accurately reflect patterns among whites than blacks, particularly for the impact of employment-related attitudes on the propensity to work. Therefore, we will examine these issues separately for black and white women.

FIGURE 1. OVER-TIME RELATIONSHIP BETWEEN SEX-ROLE ATTITUDES (NONTRADITIONALITY) AND EMPLOYMENT BEHAVIOR


Nontraditionality T1
+
Nontraditionality T2
+
+
+
Employment Status T1
Extent of Employment Between T1 and T2

DATA AND METHODS

Sample

The data are the two cohorts of female respondents included in the National Longitudinal Surveys. The survey responses we use for the younger women (aged 14 to 24 in 1966) were collected in 1968, 1969, 1970, 1971, and 1972, and for the older women (aged 30 to 44 in 1966) in 1967, 1968, 1969, 1971, and 1972.

We did not include all available cases in our analyses for the following reasons. The impact of sex-role traditionality is relevant only for married women because unmarried women often have little choice but to work, regardless of their attitudes. In addition, given the emphasis on fertility patterns in projections of the female labor force by the U. S. Department of Labor in 1976, as well as prior evidence concerning the influence on employment of husband's attitudes (Centers et al., 1971; Duncan et al., 1973), we wish to examine the relative importance of wives' sex-role attitudes, the attitudes of their husbands, and the presence of children as determinants of women's labor force behavior. Thus, our analysis is restricted to those women from each cohort who were married throughout the time period observed (1967 to 1972 for older women and 1968 to 1972 for younger women). 3/ Also, we included only those younger women who were at least 18 years of age in 1967. Based on these selection criteria, the younger sample used for our analysis includes 116 blacks and 630 whites, while there are 482 blacks and 2,280 whites in the older sample.

3/ We also excluded from the sample women who changed their marital status between the initial and final survey dates because of the effects of such status changes on employment probabilities.

Variables

The measure of *sex-role nontraditionality in 1972*, our most complex variable, is a scale produced by summing responses to seven items. 4/ Inclusion of items was based on an oblique factor analysis of nine possible items, which produced significant loadings according to Child's (1971) rule of thumb for the items included. For all attitude measures, items were recoded so that high values represent nontraditional responses.

4/ Response categories ranging from "strongly agree" to "strongly disagree" were provided for the following statements:

(1) Modern conveniences permit a wife to work without neglecting her family.

(2) A woman's place is in the home, not in the office or shop.

(3) A job provides a wife with interesting outside contacts.

(4) A wife who carries out her full family responsibilities doesn't have time for outside employment.

(5) The employment of wives leads to more juvenile delinquency.

(6) Working wives help to raise the general standard of living.

(7) Working wives lose interest in their homes and families.

Reliabilities (Cronbach's alpha) for this scale are: whites--.858; blacks--.647.

The measure of initial sex-role nontraditionality for the older women (1967) and the younger women (1968) is simply a summation of three items. 5/ To include the maximum number of respondents, missing responses to all sex-role items were recoded to the mean for all cases before summing. We expect bias in this regard to be minimal because relatively small proportions of the cases were missing on any one item (see Kmenta, 1971, for a discussion).

Because the initial three-item measure of traditionality was also available in 1972, we could have used identical measures for earlier and later years. However, we employed the alternative scale (not available for the earlier year) because it is a theoretically more adequate measure of nontraditionality. 6/ Furthermore, in order to obtain accurate estimates of the impact of work experience on later attitudes (see Figure 1), we must control for the effects of previous attitudes. By using the same (less desirable) indicator of attitudes, measurement error would increase the likelihood of correlated errors between the two measures of traditionality, biasing all of the other estimates.

5/ The initial sex-role traditionality scale for both cohorts contained the following stem and statements: "Now, I'd like your opinion about women working. People have different ideas about whether married women should work. Here are three statements about a married woman with children between the ages of 6 and 12. In each case how do you feel about such a woman taking a full-time job outside the home: it is definitely all right, probably all right, probably not all right, definitely not all right?"

(1) if it is absolutely necessary to make ends meet

(2) if she wants to work and her husband agrees

(3) if she wants to work, even if her husband does not particularly like the idea

Respondents who were undecided were given a median score of "3" on each item. Reliabilities (Cronbach's alpha) for this scale are: whites--.535; blacks--.545.

6/ In an analysis (not reported here) using the three-item scale for 1972 nontraditionality, the direct effects of substantive interest were substantially similar to those reported for the seven-question scale.

Extent of employment varies from "0" to "3," depending on how many of the relevant years a respondent was in the labor force. For the older women these years were 1968, 1970, and 1971; for the younger women they were 1969, 1970 and 1971.

Control variables

To assess the impact of initial nontraditionality on extent of employment, we must control for the over-time consistency of labor force participation, which is related to traditionality and, consequently, may produce a spuriously high correlation. Thus, our model controls for the effects of participation in the initial year (1967 for the older women, 1968 for the younger women). For both groups, initial employment is measured by a dummy variable, scored "1" if the woman was in the labor force and "0" if she was not.

We also control for other variables related to both attitudes and employment that may produce spurious relationships. The inclusion of such additional controls is especially warranted because when controlling for the consistency of attitudes and employment, by including the impact of previous measures on later measures, the possibility of correlated errors is especially likely (Hannan and Young, 1977). Thus, the model to be estimated must include those variables that might produce spuriously high consistency coefficients between the repeated measures. The following are additional controls included in the analyses.

The woman's perceptions of her husband's attitudes toward her working (if she is employed) or of her starting work (if she is not currently employed) is measured by a single item to which five answer choices were provided. They range from strongly supportive to strongly opposed. For both cohorts these items were measured in the initial year. We justify including husband's attitudes as a control variable on two grounds. First, some earlier research based on the NLS data (Kim and Murphy, 1973) indicates a significant effect of husband's attitude for the labor force behavior of white wives. Second, the modified cross-lagged model used in this study, which includes controls for wife's initial employment, eliminates the problem of ambiguous causal inferences identified by some analysts (Waite, 1977).

Husband's income represents the effects of other available family income on wife's employment behavior. Consequently, this variable measures economic need as an influence on the extent of wives' work. Number of children in the household was measured differently for the two cohorts. The number of children at home in 1967 was used for the older women because this cohort had largely completed their childbearing at the start of the surveys (1967). In contrast, many of the younger women were at or approaching the childbearing stage of the life cycle. Therefore, we controlled for number of children in 1968 when estimating effects on extent of employment between 1969 and 1971, but used number of children at home in 1972 as a control when estimating sex-role traditionality in 1972.

A woman's work preparation is another important determinant of both employment behavior and sex-role attitudes. Such preparation taps both human capital influences on employment probabilities and variation in tastes for market work (Bowen and Finegan, 1969). Education is the number of years of regular schooling completed at the start of the surveys. Job training ranges from "0" to "5," depending on how many of several varieties of training (including types of on-the-job, vocational, and company) a woman received. Although it would have been preferable to measure the extent of each training type, we were unable to do so because of a lack of consistency in the coding of these variables. Socialization experiences, such as mother's work history, may also affect a woman's work behavior (Almquist and Angrist, 1970). This measure is a dummy variable, scored "1" if the woman's mother was employed when the daughter was 15 years old, and "0" if she was not. Age is included as a control for younger women, due to its potential effects on employment probabilities. The unemployment rate and demand for female labor in the local labor market were controlled in initial analyses. However, because they failed to demonstrate significant effects for either cohort, they were deleted from the equations presented below.

Procedures

All analyses use standard ordinary least-squares regression techniques. Our strategy was to estimate the impact of initial (1967 or 1968) attitudes on extent of employment in the following interval, controlling for work status in the initial year and all other independent variables. We then estimated the effects of extent of employment on 1972 attitudes, controlling for initial attitudes and work status in addition to the other controls. This model is similar to the cross-lagged approach (see Heiss, 1970; Snyder and Hudis, 1976), where stability coefficients (that is, the effect of X_{t_1} on X_{t_2}) are estimated in addition to the cross-lagged coefficients (that is, the effect of X_{t_1} on Y_{t_2}). However, we are not substantively interested in the stability coefficients and, instead, are more concerned with controlling these consistency effects when estimating the cross-lagged coefficients of direct concern.

FINDINGS

The means and standard deviations presented in Table 1 demonstrate a number of anticipated differences between black and white women and at the two life cycle stages. First, black women are more nontraditional (as are their husbands); they are also more likely to work than are white women and more frequently had working mothers. Black women have lower levels of educational attainment, larger numbers of children, and husbands with lower incomes. These differences support racial variations observed in a variety of previous studies (Farley and Hermalin, 1972; Sweet, 1973; Hudis, 1977).

Differences between the two cohorts of women with respect to own and husband's attitudes are extremely small, although in the initial year an unexpected tendency exists for older women and their husbands to be less traditional than are their younger counterparts. However, there is a tendency for younger women to be less traditional in 1972, a pattern of differences that conforms with previous research (Parelius, 1975; Welch, 1975). Other expected differences between the two cohorts exist; older women have husbands with higher incomes, and they also have larger numbers of children (due to both their older age and secular fertility trends) and a greater variety of job-training experiences.

TABLE 1. MEANS AND STANDARD DEVIATIONS OF VARIABLES IN ANALYSES OF SEX-ROLE NONTRADITIONALITY AND EXTENT OF EMPLOYMENT, BY COHORT AND RACE.

	Older Women				Younger Women			
	Whites		Blacks		Whites		Blacks	
Variable	Mean	s.d.	Mean	s.d.	Mean	s.d.	Mean	s.d.
Initial work status	.431	.495	.643	.480	.475	.500	.509	.502
Extent of employment	1.397	1.297	1.896	1.216	1.224	1.210	1.629	1.198
Initial sex-role nontraditionality	9.898	2.458	10.714	2.492	9.605	2.526	10.612	2.308
1972 Sex-role nontraditionality	16.969	4.898	17.071	4.054	17.053	4.141	18.144	3.928
Husband's attitude	2.956	1.582	3.805	1.447	2.702	1.012	3.701	1.296
Husband's income	8250	5758	4933	3302	5350	2862	3518	2054
Number of children - 1967	2.729	1.711	3.537	2.635				
Number of children - 1968					1.003	.963	1.638	1.264
Number of children - 1972					1.978	1.012	2.785	1.597
Education	11.859	2.315	10.390	3.031	11.778	1.854	10.176	2.122
Job training	1.324	.977	.614	.884	.475	.726	.457	.774
Mother's work history	.314	.464	.566	.496	.351	.478	.560	.498
Age					21.822	1.805	21.302	1.809
N	2280		482		630		116	

In testing the model depicted in Figure 1, we are especially interested in the effects of initial nontraditionality on subsequent continuity of employment and such employment experience on 1972 nontraditionality. The results for the younger women presented in Table 2 support our expectation of temporal feedbacks, but only for whites.

For whites, nontraditionality increases labor force participation, and this work experience enhances nontraditional attitudes at a later point. 7/ However, while statistically significant, the effect of young women's own attitudes on labor market behavior is relatively small, and far less important than is the impact of their husband's attitudes. While initial attitudes do shape employment behavior to some degree, among young white women prior labor force experience appears to be a more salient influence. 8/ For both black and white women, the effect of initial work status on extent of employment indicates that those who worked in the past are very likely to work in the present, regardless of their attitudes. These findings for young white females suggest the spiraling effect of nontraditional attitudes and employment behavior discussed earlier, despite the observation that over the short run, attitudes have only a moderate effect on immediate work continuity. In contrast, for young black females early work participation operates to establish a pattern of continued employment irrespective of their attitudes toward the acceptability of working.

Control variables included in the analyses have scattered effects on the two dependent variables for the two racial groups. First, as anticipated, husband's attitudes are a salient influence on the employment behavior of young white women, while these attitudes have little effect for blacks. This difference supports

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7/ The strong effect of extent of employment on 1972 attitudes remained even when work status in 1972 (in or out of the labor force) was controlled (for both younger and older women).

8/ This relatively weak effect of attitudes on employment remained even when the analysis included only married women with children, supposedly those facing the severest family pressures (and, perhaps, more susceptible to variations in attitudes).

TABLE 2. EQUATIONS PREDICTING EXTENT OF EMPLOYMENT, 1969-1971 AND SEX-ROLE NONTRADITIONALITY, 1972, BY RACE FOR YOUNGER WOMEN.

	Whites				Blacks			
Dependent Variable:	Extent of Employment 1969-1971		Nontraditionality 1972		Extent of Employment 1969-1971		Nontraditionality 1972	
Independent Variable	b	Beta	b	Beta	b	Beta	b	Beta
Work status, 1968	.788[a]	.325	-.668	-.070	.920[a]	.386	-.143	-.018
Nontraditionality, 1968	.029[a]	.061	.233[a]	.124	-.011	-.021	.191	.112
Extent of employment, '69-'71			1.113[a]	.284			.189	.058
Husband's attitude	.152[a]	.190	.156	.050	.054	.056	.238	.077
Husband's income[b]	-.003[a]	-.067	.009[a]	.076	-.006	-.107	.007	.046
Number of children	-.080	-.063	-.270	-.058	-.186[a]	-.191	-.166	-.068
Education	.007	.010	.312[a]	.122	.054	.089	.159	.080
Job training	.202[a]	.121	.368	.056	.236[a]	.157	-.195	-.040
Mother's work history	-.065	-.026	.192	.019	-.075	-.031	-1.410[a]	-.179
Age	-.012	-.018	.124	.047	.117[a]	.177	-.233[a]	-.107
R^2	.294		.151		.284		.082	
N	630				116			

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[a] Coefficient at least twice its standard error.

[b] Measured in hundreds of dollars.

earlier arguments that subcultural differences mandate employment for most black women regardless of familial circumstances that often curtail employment among whites. Second, the effects of education and job training are stronger for blacks, paralleling previous findings for earnings attainment (Treiman and Terrell, 1975; Hudis, 1977), and suggesting that the familial and economic uncertainties black women face lead them to greater utilization of their training than is true among white women. Finally, the impact of children in the household has a negative effect on employment only among blacks. This finding is contrary to earlier observations (Sweet, 1973) that white women's employment behavior is more strongly influenced by the constraints of child rearing and other family responsibilities. These surprising results may be due to the more rapid family formation (and ultimately larger family size) of black women (see Table 1), increasing the variation, and so the impact, of number of children in 1968.

The results for older women in Table 3 indicate a largely similar pattern to that for the younger cohort. Attitudes have a significant but relatively weak effect on short-run employment (for whites only), and such work experience further increases levels of nontraditionality, this time for both racial groups. Again, husband's attitudes have a more powerful influence on the employment behavior of wives than does a woman's own orientation--for both black and white women--although the relative importance of husband's attitudes (compared to one's own) is less for older than for younger females.

A comparison across cohorts of the unstandardized regression coefficients shows greater consistency in work behavior for the older women, probably the result of reduced child-rearing pressures and other work interruptions. Sex-role attitudes are also more consistent over time, although a significant stability effect exists only for whites. The control variables have scattered effects for both racial groups. Two of these effects are of particular interest. Husband's income negatively influences extent of employment only among whites, continuing a pattern also observed for the younger women. In addition, children in the household have little influence on continuity of employment for either group of older women, reflecting the completion of childbearing and the reduction in child care responsibilities for black women in this cohort (children were a salient influence for younger black wives but not for their white counterparts).

TABLE 3. EQUATIONS PREDICTING EXTENT OF EMPLOYMENT, 1968-1971 AND SEX-ROLE NONTRADITIONALITY, 1972, BY RACE FOR OLDER WOMEN.

Dependent Variables:	Whites				Blacks			
	Extent of Employment 1968-1971		Nontraditionality 1972		Extent of Employment 1968-1971		Nontraditionality 1972	
Independent Variables	b	Beta	b	Beta	b	Beta	b	Beta
Work status, 1967	1.611[a]	.615	-.144	-.015	1.356[a]	.535	.487	.058
Nontraditionality, 1967	.029[a]	.054	.513[a]	.258	.002	.004	.048	.029
Extent of employment, '68-'71			1.172[a]	.310			.954[a]	.286
Husband's attitude	.090[a]	.110	.036	.011	.068[a]	.081	-.171	-.061
Husband's income[b]	-.006[a]	.072	.003	.012	.000	.010	-.000	-.002
Number of children	-.017	-.023	-.074	-.026	-.018	-.039	-.053	-.035
Education	.032[a]	.056	.237[a]	.112	.065[a]	.162	.087	.073
Job training	.030	.023	.263[a]	.052	.063	.046	.415[a]	.091
Mother's work history	.043	.015	.027	.003	.098	.040	.049	.006
R^2	.532		.241		.397		.140	
N	2280				482			

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[a] Coefficient at least twice its standard error.

[b] Measured in hundreds of dollars.

DISCUSSION

These findings have important implications for projections of women's labor force participation rates, including the relevance of changing sex-role attitudes for women's desire for employment. Our analyses suggest that among white women, at both early and later stages of the life cycle, labor force participation will continue its upward spiral. Nontraditional attitudes toward women's work increase the extent of work participation, and the experience of labor force involvement further increases a woman's nontraditionality. Consequently, we conclude that changing sex-role norms contributed to the growth in women's labor force participation over this period, subsequently increasing levels of nontraditionality.

Based on our model we can also make the assumption that sex-role attitudes in 1972 (which were less traditional than those in the earlier period) increased the likelihood and extent of employment for younger and older white wives. Extrapolating from the observed cyclical process, increases in labor market work among white wives should continue in future years. Furthermore, if nontraditionality increased more rapidly subsequent to 1972 than it did during the previous period (as suggested by Mason et al., 1976), the resulting growth in desire for employment also would have accelerated. While the impact of attitudes on employment--in the short run--is relatively weak, the size of this effect must be assessed in its longer-run context. Given the increasing tendency for women to perceive all dimensions of traditionality as related (Mason et al., 1976), women are more likely to demonstrate behavior that conforms to their attitudes in a variety of life situations. Consequently, the longer-run influence of employment-related attitudes may have an even more profound impact on white women's labor force patterns than our model for the early 1970s suggests.

Our analyses suggest continued racial differences in the process determining female employment, despite the gains young blacks have made in employment opportunities and income (Farley and Hermalin, 1972). These findings support earlier arguments concerning subcultural differences in the appropriateness of working for black and white married women. Thus, accurate labor force projections will require separate estimations by race. According to our findings, the employment behavior of blacks will not be affected by recent attitudinal changes.

One impressive racial similarity exists: the striking stability of work behavior. This influence of earlier participation on later extent of employment has been recognized in previous studies (Mott, 1972; Sweet and Lowe, 1974) and should be emphasized in the context of currently low fertility rates, and particularly, recent evidence of delayed childbearing among women now entering their early thirties. It has long been argued that employment and childbearing have reciprocal negative effects on one another. To the extent that employment experience (with its attendant human capital accumulation) raises the opportunity costs of children, work experience reduces family size. In addition, early childbearing produces conflicts between work and family responsibilities that are most often resolved in favor of family-related commitments (Coser and Rokoff, 1971). Early family formation also limits young women's opportunities to develop tastes for alternative life styles. However, among young women maturing under conditions of changing sex-role norms, marriage and/or childbearing may be delayed, thereby increasing opportunities for work experience and the growth of preferences for roles that include relatively continuous employment. As a result, the higher levels of early labor force participation among today's young women may drastically alter their continued desire for employment later in life. When coupled with the exceptionally low fertility of these young women, their desire for work during their middle years may hardly resemble levels currently displayed by women past the childbearing ages.

Several additional observations from our analyses also require discussion. First, previous studies demonstrate the difficulties involved in determining the direction of causal influence between husband's attitudes toward their wife's employment and the extent of wife's work (Waite, 1977). Through the use of the NLS data and a modified cross-lagged research design, we have shown that wives' perceptions of their husbands' attitudes do influence future employment among white women in both cohorts and among older black females. Among whites, this largely unexplored determinant of working has an even stronger impact than does the woman's own sex-role orientation. Thus, to adequately anticipate changes in female labor force participation, attitudes and attitude change among men must be examined.

We did not observe that older women's employment patterns were more strongly influenced by their attitudes than is true among young women. Consequently, labor force participation rates among this cohort of older women should not increase disjunctively because of an increased impact of attitudes on desired employment. However, based on the effects of both attitudes and higher levels of early employment among younger women, later cohorts of women reaching the middle years may display greater employment propensities.

In summary, recent declines in sex-role traditionality among American women are likely to accelerate the desire for employment among whites, despite the relatively weak short-run influence of employment-related attitudes on immediately subsequent work behavior. We argue for such effects on the basis of evidence that attitudes and behavior interact to produce a long-term spiral of nontraditional orientations and increasing employment. For the brief period under investigation, this feedback relationship exists among both young and older white wives. In contrast, among blacks, attitudinal changes appear to have little salience for the future employment of current adult cohorts. However, early labor force involvement has a strong influence on continued employment, and any changes in early market work for black adolescents soon entering the labor force will be important predictors of their future desire for work. Our findings that education and job training are fairly strong positive influences on labor force participation among blacks suggests that programs aimed at providing such skills to minorities may be one such influence increasing both the long-term and short-term desire for work among black women. Finally, especially among whites, the attitudes of husbands toward women's involvement in the labor market need to be addressed in labor force analyses. Particularly given the currently undeveloped state of our knowledge of changes in men's attitudes, this is a priority for future research.

POLICY IMPLICATIONS

Our previous discussion focused on several findings of this research: the spiraling relationship between sex-role attitudes and women's employment behavior, differences in this relationship between black and white women, future employment patterns that may result from the interaction of attitudes and women's labor force patterns, and the importance of husband's attitudes in modeling wife's employment. Each of these conclusions has implications for the development of employment policy and the estimation of labor force projections.

First, to the extent that various groups of (white) women differ in their sex-role attitudes, as well as their rate of change in such orientations, the desire for work will vary according to such attitudes. Consequently, the development of programs to stimulate employment opportunities should take account of the varying target populations of women that will be seeking work at differential rates. Those women with especially nontraditional orientations are likely to make the heaviest demands for future inclusion in the labor force. These sectoral differences in desires for employment, as well as the overall level of change in sex-role attitudes, should be important components of employment policies that seek to match available opportunities with the skills and desires of potential workers, and are consonant with improving the status of women and achieving affirmative action goals.

Second, we observed that among whites, the number of children at home has little influence on short-run employment behavior, while the impact of husband's attitudes was important. While fertility trends should not be abandoned as variables in labor force projections--to the extent that delayed childbearing increases early labor force involvement, fertility rates will remain important--we are suggesting that data on changing attitudes toward employment of both men and women also should be collected and applied to the development of projections.

Third, among black women, attitudes have little influence on employment behavior, but early employment experience is an important predictor of later market work. Consequently, governmental intervention to decrease teenage unemployment must also recognize the potentially important spiral of desire for continued employment that may result from higher early labor force participation rates. This longer-term effect implies a need to go beyond the development of job opportunities for youth to programs with a greater career focus.

Fourth, we caution against the heavy reliance on projections based on post-World War II employment trends. To the extent that changing attitudes shape the desire for labor market work, and based on the accelerated change of these attitudes, existing projections may be grossly inaccurate, especially for young women currently reaching adulthood. Similarly, even among older women, attitudes are an important component of the sex-role/employment spiral. Among women of all ages, both attitudes and labor force experience have shifted over the last decade. We suspect that the life cycle pattern of rapidly declining employment rates at older ages partly reflects the traditional attitudes of older women and their lack of occupational advancement due to minimal work experience. Consequently, we cannot assume that the sharp drop-off in employment characteristic of women in the later years (over age 50) will necessarily continue as attitudes change and lifetime work experience increases. Should their employment rates remain relatively high, they will provide competition with less-experienced workers (both male and female) seeking initial entry into the labor force. The decline in employment rates late in life has been an important source of occupational mobility and job opportunities for youth, one that may diminish in the future. The implications of a change in this life cycle pattern for policies aimed at reducing youth unemployment may be a seriously underestimated problem in current policy formulation.

Finally, while we have made a strong case for the importance of sex-role attitudes as an influence on the long-term spiral of women's desire for employment, except for the NLS data little additional survey material exists for further tests of these findings. We urge the investment of resources for the collection of additional data in order that both policy development and labor force projections can accurately reflect the major attitudinal and behavioral changes currently under way in American society.

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EMPLOYMENT, INCOME, AND FAMILY LIFE: THE CASE OF MARITAL DISSOLUTION

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It is common knowledge that a person's family situation influences his or her work behavior. We know, for example, that single women have the highest rate of labor force participation of all women, that married women with small children have the lowest rate, and that married women with older children fall in between. And we know that married men have higher labor force participation rates than single men. But the relationship between family and work runs the opposite way also--a person's work behavior can influence his or her family situation.

The influence of employment and income on family life is important to investigate because policymakers are concerned today with the effects of government programs on American families. We now realize that many programs and policies--welfare regulations, tax preferences, military transfer practices--have unintended effects on families. Because working is a central role for adult family members, it seems likely that employment and training policies also may have unexpected effects. Consequently, in order to develop more effective employment and training policies and programs, we must study the ways in which employment and income influence family life.

Here I will report the effects of a family's economic situation on the probability of marital dissolution (by which I mean divorce and separation combined) in subsequent years. While marital dissolution is the most extreme effect that income and employment can have on family life, other, less disruptive effects also are worth studying. But with the recent rise in the divorce rate, marital dissolution has become a topic of widespread interest and concern.

The National Longitudinal Survey of Mature Women provides an excellent source of information on this question. Prior to the development of this panel of women, most inferences on the relationship between working and family life were drawn from cross-sectional (one point in time) data, such as Bureau of the Census Surveys. In cross-sectional surveys we can correlate a family's economic situation with its marital status, but we cannot tell cause from effect. For example, we can see from census publications that divorced women are more likely to work than married women, but we cannot tell whether they started working before or after their marriage dissolved.

In the NLS panel, on the other hand, we can follow the lives of married women for several years. By comparing women who remained married throughout the life of the panel with those who divorced or separated, we can investigate the effects of differences in the economic situations of the married women on marital stability in subsequent years.

In this paper I will report on data from the 1967, 1969, and 1971 interviews. (The 1968 interview contained no information on marital status, and the post-1971 interviews were not available when this analysis was done.) The women I studied were the 2,685 white, nonfarm women who reported themselves as married with husband present in 1967 and who remained in the panel during these years. 1/ I observed whether each woman separated from or divorced her husband by 1971, and I compared statistically the women who remained married with those who dissolved their marriages.

During the four year period, 4.4 percent of the 2,685 white, nonfarm women reported that they had become divorced or separated. This relatively low dissolution rate was a result of the selection of women in the 30 to 44 age group. We must bear in mind that the choice of this age group means that we will be examining "older" dissolutions, which usually account for only a portion of the dissolutions reported in census or state data. The results presented here may

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1/ The data for a smaller number of blacks, which were analyzed separately, resulted in regression estimates that were largely not significant.

reflect age-specific effects. This longitudinal data set, nevertheless, represents a great improvement over cross-sectional data. And the age range allows us to examine the economic potential of wives who were old enough to have finished all schooling and initial job training.

THEORY AND PAST RESEARCH

Husbands who earn the least amount of money, previous research has shown, are the most likely to become divorced (Goode, 1956; Cutright, 1971; Glick and Norton, 1971; Udry, 1967). Although this statistical relationship is well documented, the explanation for it is unclear. Most sociologists have accepted this relationship at face value, either offering no explanation or assuming that the lack of money ruins the marriage. Thus, most sociological research on economics and family life has begun and ended with the measurement of the husband's earnings.

But it is possible that some other problem, which is correlated with low earnings, is the more fundamental cause of marital dissolution among poor couples. I will present evidence that one such problem, the stability of the husband's employment, is as important in determining marital dissolution as the level of his earnings. Although employment stability and earnings are related, they are distinct nevertheless. One person may hold a steady, low-paying job, while another has a series of intermittent, higher-paying jobs that yield the same total earnings. This difference between steady and unsteady work and between stable and fluctuating earnings can be important to the successful functioning of families.

In fact, sociologists writing during the Depression emphasized the importance of employment stability for marital stability. Mirra Komarovsky (1940), in interviews with 59 families in which the husband had been unemployed for at least one year, found numerous examples of what she called the "breakdown of the husband's status" in the family. This breakdown, she wrote, was due most frequently to the loss of earning power: "loss of earning ability has lowered the prestige of the man in the eyes of his wife." The basic threat to family stability, Komarovsky found, was not lack of money, although that obviously was a severe problem, but rather the failure of the father to fulfill the expectations of his family. Other researchers also noted the importance of stable employment. Burgess and Cottrell (1939) analyzed marital adjustment scores for husbands with different occupations and concluded that "there is some evidence in the distribution to indicate that it is not the amount of income but its degree of certainty which is related to marital happiness." And they reported higher adjustment scores for couples who had some savings in the bank.

The connection between marital dissolution and the instability of the husband's employment and income makes good sociological sense. Of all the social roles that a married man must perform, the role of breadwinner is perhaps the most important. Husbands are supposed to provide for their families by bringing home a regular income. It may be that the regularity with which a husband fulfills this expectation is as important to his family as the level of his income. A husband with steady employment and some savings is dependable; his family faces little uncertainty about his financial contribution, and they know what to expect in the near future. I hypothesized, then, that the Mature Women panel would show that when a husband experienced greater instability of employment and income (as measured below by weeks worked in the previous year and amount of savings), the probability of marital dissolution in subsequent years would be higher, independent of the husband's income level.

Yet the husband is often not the only employed family member, especially in low-income families. The earnings of the wife also can contribute to the stability of the marriage, or to its dissolution. Although sociologists have ignored women's economic contribution to the family until recently, economists have provided a framework for including wives' earnings and employment in the study of marital dissolution (see Becker, 1973; Ross and Sawhill, 1975).

The earnings of a wife can have two effects on the marriage. On the one hand, her earnings increase the total income of the family, which should decrease the probability of dissolution because higher-income families are less likely to divorce (Bernard, 1966). On the other hand, her job represents a source of income that is independent of her husband. If the marriage is troubled, a woman with an independent income may be more likely to separate--or her husband may be less reluctant to leave. Following others (Ross and Sawhill, 1975; Hannan et al., 1977), I will label these two effects the income and independence effects, respectively, of wives' earnings.

The independence effect depends on the husband's earnings level as well as the wife's earnings level. It is the relative earnings level of the wife that matters, for a wife capable of earning $2.00 per hour should be more likely to dissolve her marriage if her husband earns $2.30 per hour than if he earns $5.00 per hour, other things being equal. In other words, when the wife's earnings are high relative to her husband's, she has less to lose by separating. And wives in low-income families--which, as I have noted, have the highest dissolution rates--tend to have higher relative earnings levels.

As economists have formalized it, the economic gains to marriage depend on the complementarity of the skills of the husband and wife. The independence effect, in particular, depends on the ratio of the wife's labor market productivity to the husband's labor market productivity (where market productivity frequently is measured by wages). When this ratio is high, the wife gains relatively less by trading housework for the husband's market wages. If we assume that the wife is at least as productive in the home as the husband and that both have similar consumption tastes, we can hypothesize that the greater the wife's actual or potential wage relative to the husband's wage, the more likely is marital dissolution.

There is another potential source of independent income for poor women, namely, Aid to Families with Dependent Children (AFDC). Many people believe that the current AFDC program encourages fathers to leave their families, so that their wives and children will be eligible for AFDC, but the evidence is mixed. Moles (1976) reported that higher state AFDC payments were associated with greater proportions of separated women (excluding divorced women) for blacks in 1960 and blacks and whites in 1970. Other research findings, however, have indicated that the effect of AFDC on separation and divorce may be small, although high AFDC payment levels appear to encourage the postponement of remarriage among those already divorced (Bane, 1975; Sawhill et al., 1975). I will report the effects of AFDC payment levels in the Mature Women panel, although shortcomings of the data limit the conclusions I can draw.

In addition, we must consider the influence on wives of prevailing norms concerning the propriety of female labor force participation. It may be that some wives feel more constrained to conform to the traditional role of housewife than do others, due to internalized norms or to pressures from the community. Women who feel less comfortable with a role that includes market work should be less likely to separate or divorce, regardless of their opportunities in the labor market. I will examine a set of attitude items in the mature women surveys that provide evidence of the effect that attitudes toward market work have on the probability of dissolution.

METHODS

A dummy variable was created that took the value of zero if the woman remained with her husband and the value of one if the woman separated or divorced during the course of the study. A series of ordinary least squares (OLS) regression estimates were calculated with this dummy variable as the dependent variable and various characteristics of the woman and her husband in 1967 as independent variables. The dependent variable can be viewed as the probability of dissolution during the four years for a woman, and the regression equations can be viewed as linear probability functions. There are some statistical difficulties with OLS estimates when the dependent variable is dichotomous, notably heteroskedasticity (Goldberger, 1964). When I repeated the data analysis using the more statistically appropriate, but more complex, logit-maximum likelihood estimation procedure, the results were very similar (see Cherlin, 1976). I will present only the OLS estimates in this paper.

I chose hourly wages as the primary indicator of earnings in 1967 for wives in the panel and their husbands. For husbands and wives in the labor force, I used the 1967 hourly wage rates that they reported.

Fifty-two percent of the nonfarm women who were married with husband present in 1967, however, had worked for pay during this period, and a much smaller percentage of husbands were not at work then. Since these men and women probably would have expected to earn some money in the event of a dissolution, I imputed a wage to them based on their measured characteristics as compared to the characteristics of men and women who did report a wage. The results of this procedure (see Cherlin, 1976) compared favorably with similar attempts at predicting wages by economists (Mincer and Polachek, 1974; Sandell and Shapiro, 1975).

To test the hypothesis concerning the independence effect of wives' earnings, I used a variable that was a ratio of two economic alternatives. The numerator was the actual hourly wage of the wife, if she had worked at least two weeks between the beginning of 1966 and May 1967, or the expected wage outlined above if she had not worked during this period. The denominator was the actual or expected hourly wage of the husband.

Several demographic variables were included in the regression specification, but an adequate discussion of their impact on marital dissolution is not possible within the space limitations of this paper. Here, the demographic variables will be treated as controls. I refer the reader who is interested in the effects of demographic variables to Cherlin, 1976 and 1977.

RESULTS

Table 1 displays the estimated coefficients from an OLS regression of the probability of marital dissolution between 1967 and 1971 for nonfarm white women aged 30 to 44 who were married with husband present in 1967. 2/ Readers who are unfamiliar with regression equations may prefer to examine the adjusted probabilities of dissolution in Table 2, which will be discussed in more detail below.

2/ For the 88 white women who left the sample after 1969 and whose records had no missing data, the interval from 1967 to 1969 was used.

Table One

OLS REGRESSION OF FOUR YEAR DISSOLUTION PROBABILITIES ON ECONOMIC AND SOCIAL DEMOGRAPHIC VARIABLES FOR WHITE, NONFARM WOMEN AGED 30 TO 44 WHO WERE MARRIED WITH HUSBAND PRESENT IN 1967

Dependent Variables: Unity, if wife separated from or divorced her husband between 1967 and 1971; zero, otherwise.

Independent Variables	Estimate	t-statistic
A. Economic Variables		
Number of weeks worked by husband in 1966	-.00127	2.23*
Number of weeks worked by wife in 1966	.00012	.055
Actual or expected hourly wage of wife in 1967 divided by actual or expected wage of husband	.0239	2.38*
Whether couple had savings of $1 to $999 in 1967	-.00986	0.87
Whether couple had savings of $1,000 or more in 1967	-.0253	2.12*
Score on three item 1967 work attitude scale; high score indicates agreement that market work is appropriate for women.	.00613	3.37*
Average monthly AFDC payment per recipient in region of residence in January 1967, in dollars.	.00002	0.03
B. Demographic (Control) Variables		
Duration of current marriage in years as 1967	-.00379	3.54*
Whether in second marriage in 1967	.0253	1.44
Whether in third or fourth marriage in 1967	.157	3.91*
Age in years at the time of first marriage	-.00226	1.41
Natural logarithm of the population size of the place of residence of the wife in 1967	.00316	2.29*
Number of children less than age 18 present in the household in 1967	.00422	1.26

Table One
(Continued)

Independent Variables	Estimate	t-statistic
Whether the year of birth of the oldest child present in the household was earlier than the year of the first marriage for the wife	.0671	1.64
Whether one or more children ages 0 to 5 were present in the household in 1967	-.0276	2.42*
Whether one or more children ages 6 to 17 were present in the household in 1967	-.00093	0.06
Age of husband minus age of wife in years, if husband is older than wife; zero, otherwise	.00364	3.15*
Age of wife minus age of husband in years, if wife is older than husband; zero, otherwise	.0174	4.57*
Highest grade completed by wife as of 1967:		
One to three years of high school	-.0216	1.37
Four years of high school	-.00632	0.43
One to three years of college	.00034	0.00
Four years of college	-.0193	0.86
One or more years of post-graduate study	.0103	0.27
Constant	.0930	
R^2	.0715	
F	7.03	
n	2126	

* = significant at the five percent level

WAGES

The wage ratio variable was statistically significant at the 5 percent level with the expected sign. In this subsample, the greater the ratio of the wife's to the husband's actual or expected wage in 1967, the greater the probability of dissolution by 1971. Thus, the independence effect of the wife's income on subsequent marital dissolution was noticeable in the Mature Women panel.

Although I have argued that it is the ratio of the wife's to husband's wages rather than the absolute level of those wages that is important for dissolution, the issue cannot be settled by this one study. All three variables (husband's wage, wife's wage, and wage ratio) could not be entered into the equation at once without severe multicollinearity problems. In another specification (not reported here) I excluded the wage ratio variable and entered both the wife's and the husband's actual or expected wages as separate first-order terms. In this specification, the effect of the husband's actual or expected wage, which reflects a pure "income effect" on dissolution, was negative and significant at the 5 percent level, while the effect of the wife's actual or expected wage was positive and significant at the 10 percent level (the coefficients were -.00652 for husbands and .0157 for wives). Those who remain skeptical of the wage ratio variable may prefer this latter specification. The effects of employment stability of the husband, savings, AFDC payments, work orientations, interactions, and other variables all remained the same despite the changes.

EMPLOYMENT STABILITY

As predicted, a greater number of weeks worked by the husband in 1966 was significantly associated with a lower dissolution probability between 1967 and 1971, independently of controls for wage levels, savings, and other economic and demographic variables. This finding of the importance of employment stability is consistent with analyses of another major panel study, the Michigan Panel Study of Income Dynamics. In a study of data from the first four years of the Michigan Panel, Ross and Sawhill (1975) reported that the level of annual earnings of husbands at the start of the panel had no significant effect on subsequent dissolution probabilities over the following four years, once employment and income stability were considered. But a history of unemployment for the husband did affect the probability of dissolution, as did a lower-than-usual family income in the year prior to the first interview. The lack of effect of husband's total earnings or total family income surprised the authors:

> ...the level of family income is not predictive of greater marital stability. This last finding is somewhat surprising in view of past research on this subject, but it is a result which has held up throughout our work on this data base (pp. 38-39).

The convergence of the findings from two national panel studies provides strong evidence that the employment stability of the husband is an important determinant of marital dissolution, independent of income levels.

WELFARE

Although the Census Bureau, which conducted the interviews, did not identify the state of residence of each woman, the Bureau did classify the residence of each woman as located in one of nine regions of the country. It was possible to calculate the average monthly AFDC payment per recipient in each region in January 1967, and to append the appropriate average to each woman's data record. As the estimates in Table 1 reveal, the AFDC variable had virtually no effect for whites. Since AFDC is an alternative only for low-income families/, I constructed a term for the interaction of high AFDC payment levels and low actual or expected wages of the wife. Even when this interaction variable was added to the equation, there was virtually no AFDC effect. I concluded that for whites there was no evidence that regional differences in AFDC payment levels influenced the probability of dissolution. Within the limits of the NLS data, this finding is consistent with the contention of Sawhill et al. (1975)

and Bane (1975) that the effect of the AFDC program on the proportion of female-headed families is not primarily centered on the decision to separate but rather on the decision to marry or remarry. But the regional averages used here may not adequately reflect state-by-state differences. 3/

Savings

As discussed previously, I have used savings as an indicator of income stability and security. The panel was divided into three similar-sized groups: those with no savings, those with savings of $1 to $999, and those with savings of $1,000 or more. Dummy variables were entered into the equation for each of the latter two categories.

The coefficients of both dummy variables were negative, from which we can infer that the existence of a savings account in 1967 did decrease the probability of dissolution. The presence of savings of $1,000 or more decreased the probability of dissolution by 2 1/2 percentage points, indicating that income security did lessen the probability of dissolution, independently of wage levels and employment stability.

Wives' Attitudes Toward Market Work

The 1967 interview contained three questions that allowed me to make some inferences concerning the consequences of the attitudes of wives toward the propriety of labor market work for women. The panel

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3/ Using the standard technique of analysis of variance, I partitioned the variation among January 1967, state AFDC payment levels into interregional and intraregional components. The regional averages, which must be used in this analysis, preserved 55 percent of the state-level variation in the AFDC levels. Thus, somewhat less than half the information about AFDC payment levels was lost by the need to use regional rather than state data. A good deal of variation remained, nevertheless, and it seemed appropriate to undertake the analysis using the regional data.

members were told the following:

> ...People have different ideas about whether married women should work. Here are three statements about a married woman with children between the ages of six and twelve [HAND CARD TO RESPONDENT]. In each case, how do you feel about such a woman taking a full-time job outside the home?
>
> 1. If it is absolutely necessary to make ends meet.
> 2. If she wants to work and her husband agrees.
> 3. If she wants to work, even if her husband does not particularly like the idea.

The response categories and their coded scores were as follows: (1) definitely not all right, (2) probably not all right, (3) undecided, (4) probably all right, and (5) definitely all right. A three-item scale was constructed by summing the three scores, and the scale had an alpha reliability of .53. As can be seen from the estimates in Table 1, women who approved of married women working in 1967 were more likely to separate or divorce during the life of the panel.

It is somewhat difficult to interpret the meaning of this relationship. Most women agreed with the first item, although each item contributed to the reliability of the scale. Furthermore, the third item had a higher correlation with the dependent variable in the regression estimates than did either of the first two items. Upon examining the content of this third item, we see that it may reflect conflict with husbands over working as well as a strong commitment to work. Since there are no other relevant attitudinal measures in the survey, it is difficult to decide whether responses to this question are identifying marriages where there is a strong disagreement between spouses over working or whether the responses identify women with favorable attitudes toward working. I believe that the scale is still informative on the issue of work attitudes and does offer support for the importance of women's orientations toward market work, but we must be cautious in interpreting the results until other data are available.

Interactions

The regression model so far has included only additive, first-order effects. One plausible set of interactions could occur between the number of marriages a woman has had and the influence of her economic situation. Women who have been previously divorced are likely to have lived alone or with relatives for a time and are likely to have faced the problems of supporting themselves and their children. Because of this experience, remarried women might be more concerned with their family's economic position. If so, then the economic situation would become a more important determinant of dissolution for women in remarriages.

To test this notion, I constructed five measures of interaction between second or subsequent marriage and economic factors by multiplying a dummy variable for second or subsequent marriage by (1) the number of weeks worked by the wife in 1966, (2) the number of weeks worked by the husband in 1966, (3) the wage ratio, (4) the dummy variable representing savings of $1 to $999, and (5) the dummy variable representing savings of $1,000 or more. The additional variance explained by adding those terms to the OLS regression, compared to the specification considered previously, was significant at the 5 percent level (the estimates are not shown here--see Cherlin, 1976).

Thus, there is evidence that economic factors had a greater effect on marital dissolution for women in second or subsequent marriages. The individual coefficient estimates indicated that the effects were concentrated in two of the five variables, savings of $1,000 or more and weeks worked by the wife in 1966. The estimated coefficient for the savings interaction was especially high but was probably inflated by multicollinearity problems. The coefficient for number of weeks worked in 1966 indicated that women in second or subsequent marriages who had strong attachments to the labor market were more likely to separate or divorce again, independently of their relative wage.

How Large Were the Effects?

So far I have concentrated on identifying those estimated coefficients that were statistically significant; that is, those estimates that were unlikely to have differed from zero due to chance variation alone. This is a fundamental statistical issue in a regression analysis. A second issue, which is perhaps more important, is the size of the estimated coefficients. A coefficient may be highly significant (that is, almost certainly nonzero) but very small in magnitude, with the implication that the independent variable in question has only a small effect on the dependent variable. 4/

In order to compare the magnitudes of the effects of the various independent variables, I have constructed adjusted probabilities of dissolution for categories of each economic variable, based on the OLS regression estimates in Table 1. The adjusted probabilities, which are presented in Table 2, express the effect on the probability of dissolution of an increase or decrease in one economic variable for a woman whose other characteristics were average in terms of the sample. Of course, no single woman has a set of totally average characteristics, but this device is a useful way to compare the effects of increases or decreases in the value of one variable, net of the effects of other variables. For all variables except savings, the categories shown in Table 2 correspond to the mean and approximately one standard deviation above and below the mean. For the savings dummy variables, adjusted probabilities are presented for each possible category. 5/

4/ The reader may have noted that the squared multiple correlation of the regression estimate in Table 1 is small. In part, the size of the R^2 is a result of the highly skewed, dichotomous nature of the dependent variable. Ordinary least squares estimates with a dichotomous dependent variable have an upper bound on the magnitude of R^2 which is less than 1.0 (Morrison, 1972). It is possible, however, for individual independent variables to have large effects despite a small overall "explained variance."

5/ For a discussion of a closely related procedure, see Bowen and Finegan (1969).

Table Two

ADJUSTED PROBABILITIES OF DISSOLUTION, 1967-1971, FOR WHITE, NONFARM WOMEN AGED 30 TO 44 WITH HUSBAND PRESENT IN 1967

Mean (Unadjusted) Probability of Dissolution: .044

Independent Variable	Value	Adjusted Probability of Dissolution
Weeks worked by husband, 1966	42.0	.054
	49.8	.044
	52.0	.041
Weeks worked by wife, 1966	0.0	.041
	18.4	.044
	40.0	.046
Wife's wage divided by husband's wage	.35	.033
	.78	.044
	1.25	.055
Savings	No Savings	.056
	$1 to $999	.046
	$1,000 or more	.031
AFDC payment level	$28.00	.044
	$36.50	.044
	$45.00	.044
Work Attitude Scale	7.5	.029
	10.0	.044
	12.5	.059

Note: For all variables except savings, the categories shown here correspond to the mean and approximately one standard deviation above and below the mean. For the savings dummy variables, adjusted probabilities are presented for each possible category.

Source: Table One

On examining Table 2, we see that most women were not likely to separate or divorce, whatever their economic characteristics. The uniformly low adjusted probabilities are to be expected, since divorce and separation are more likely among younger women than among those aged 30 to 44. Despite the low probabilities, certain economic variables do appear to have made a difference.

Women with no family savings had adjusted probabilities of dissolution nearly double those of women with family savings of $1,000 or more. The adjusted probability of dissolution increased by more than 50 percent as the wage ratio was increased from about one standard deviation below the mean to one standard deviation above the mean. As a woman's score on the work-attitude scale increased, the adjusted probability of dissolution doubled in curvilinear fashion. The number of weeks the husband was employed in 1966 had a steady, if unspectacular, negative impact. For those few wives with husbands who experienced prolonged unemployment in 1966, the adjusted probabilities of dissolution would have been much higher.

Whether the effects in Table 2 are seen as large or small ultimately depends on one's point of view. In absolute terms, the effects are small. But in relative terms, the effects are much greater--large percentage increases or decreases in the probability of dissolution follow from differences in the value of any of several economic variables.

Put another way, in combination the effects are quite pronounced. For example, let us compare two hypothetical women. Woman _A_ worked all 52 weeks in 1966, earned the same wage as her husband, and believed strongly that it is proper for women to work (as evidenced by a score of 13 on the work-attitude scale). Her husband had worked only 26 weeks in 1966, and the couple had no savings in the bank. Woman _B_ did not work in 1966, had a potential wage only one-third as large as her husband's wage, and had reservations about whether women should work (as evidenced by a score of 8 on the work-attitude scale). Her husband had worked 52 weeks in 1966, and the couple had $500 in savings. On all other characteristics, women _A_ and _B_ were average in terms of the sample. The predicted probabilities of dissolution, from the OLS estimates in Table 1, would be 0.12 for woman _A_ and 0.02 for woman _B_. Thus, woman _A_ would have been six times more likely to separate or divorce during the four years of the panel than woman _B_.

POLICY IMPLICATIONS

We have seen evidence that several aspects of a couple's economic situation influence the probability of marital dissolution. Two effects have the most relevance for policymakers. First, increased stability and security of the husband's employment decreases the probability of dissolution, independent of income levels. This suggests that a fundamental goal of employment and training policies--full employment--would, if attained, have an important stabilizing influence on marriages. How regularly the husband brings a paycheck home may matter more than how much he makes. I am not suggesting that money is unimportant for marital stability; quite obviously the amount of money matters. But families are more likely to remain intact through hard times if all family members are doing what is expected of them. And in our society, we expect that a husband will have a job. If he is employed, even at a low-paying job, he receives the basic respect due a breadwinner. But if he is unemployed, he fails to meet our society's definition of a successful husband.

Second, wives who have independent sources of income that compare favorably with the incomes of their husbands have a greater probability of marital dissolution. This suggests that the recent increase in the labor force participation rate of married women is one of the many causes of the increase in the divorce rate. This does not mean, of course, that all working wives will get divorced--many, probably a large majority, will not. Nor does it mean that female employment is necessarily the main cause of the rise in divorce. And it is important to remember that despite the increased labor force participation of married women, most working wives still earn far less than their husbands (Kreps, 1971). Also, other benefits to working women--such as increased self-esteem and satisfaction and greater income--may contribute positively to their family lives.

Nevertheless, we must accept the likelihood that the independence of wives in the marketplace increases the probability of marital dissolution. Policymakers, consequently, who value both strong family ties and also the rights of women to equal treatment in the labor market may face a dilemma. But there is a way out of this dilemma--and that is designing programs that assist working women and at the same time ease the sources of strain on two-earner families. Although a majority of wives soon will be in the labor force, working families still face supporting institutions based on the outdated notion that one spouse in a family will remain at home. Inflexible working hours and the effort and expense of finding adequate daycare, for example, cause problems for two-earner families with children. And these problems can lead to marital stress. Policymakers can help this situation by designing programs that support flexible work hours, job sharing, better childcare options, and other innovations. Programs such as these would strengthen family life without sacrificing support for working women.

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ECONOMIC CONSEQUENCES OF MARITAL DISRUPTION

by

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When a marriage has lasted for a long time, its end by death, divorce, or separation may leave a woman with children to support but with little recent work experience or skills that would enable her to earn an adequate living. For this reason Congress is now considering legislation to provide counseling and training programs for "displaced homemakers." But we cannot judge the merits of such legislation until we know what, in fact, are the economic circumstances of women whose marriages end after many years. How likely are they to become poor as the result of a disrupted marriage? If they do fall into poverty, is it only for a short transitional period or is it for such a long time that the life chances of their children are affected? What sources of income remain to them, and how important among these are the earnings of the women themselves?

The sample of mature women of the National Longitudinal Survey is a good source of data on these questions. The present paper represents an exploratory study that uses primarily data from the 1967 and 1972 interviews. To determine whether disruption causes poverty in the early years after a marriage ends, I have used the sample of women whose marriages ended between 1967 and 1972, at which time they were, on the average, about 40 years old. To determine whether poverty is long term or short term I studied women who had experienced a disruption before 1967 and were not remarried by 1972. These women were about 30 years of age when their marriages ended, and were, therefore, somewhat younger than the displaced homemakers of the proposed legislation (at least 40 years old). In future years, as the formerly married women in the sample grow older, it will be possible to see whether my present findings about the probability of persistent poverty continue to hold.

In the next section I describe the sample in detail. In the following sections I take up in turn each of the questions I posed concerning the economic circumstances of women in broken marriages.

DESCRIPTION OF THE SAMPLE

At the first NLS interview in 1967, 248 white women and 321 black women between the ages of 30 and 44 were separated, divorced, or widowed. By 1972 an additional 199 white women and 124 black women had experienced marital disruption--about 7 percent of white women who were married in 1967, and 16 percent of black women. The rate of remarriage was rather low over the five year period--approximately 27 percent for white women and 14 percent for black women whose marriages had ended before 1967, 13 percent and 7 percent for women whose marriages ended in 1967 or after. 1/

Unfortunately, the entire sample cannot be used because there is a high rate of nonreporting of income in the NLS. The potential bias created by missing income is discussed in detail in the Appendix. The conclusion reached there is that the incidence of poverty may be slightly overstated for married women of both races and for black, but not white, women in disrupted marriages. When comparisons can be made, however, poverty estimates from the NLS are similar to estimates from other sources.

Table 1 gives a brief profile of the marital and work background of women in three marital status categories: women who were married in 1967 but not in 1972; women who were separated, divorced, or widowed in both years; and, for comparison, women who

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1/ These figures understate both the amount of disruption and remarriage to some unknown extent, since they do not include persons who were married at two successive interviews but had a disruption and remarriage during the intervening period. However, disruption of such short duration is not likely to cause a major problem of poverty for the families involved.

Table 1 Characteristics in 1967 of Women 30-44, by Marital Status in 1967 and 1972

Means and Percentages	Married in Both Years	Married 1967, not 1972	Marriage Disrupted in Both Years
	WHITE WOMEN		
Age	37.6	37.5	37.5
Duration of marriage	17	16	10[a]
Years disrupted	--	--	6
Years since last worked[b]	12	12	9
Percent worked 1966 or 1967	56.0	62.6	78.0
Percent worked in last 5 years	62.6	71.7	83.3
N[c]	1352	99	134
	BLACK WOMEN		
Age	37.7	36.8	37.4
Duration of marriage	16	14	9[a]
Years disrupted	--	--	9
Years since last worked[b]	9	8	7
Percent worked 1966 or 1967	76.6	83.6	79.3
Percent worked in last 5 years	83.9	84.9	88.1
N[c]	373	75	202

a Duration before disruption.
b For women who did not work in 1966 or 1967.
c Number of women with income data in 1967 and 1972.

were married in both years. 2/ Only women for whom income is available at both times will be included, but comparisons with the complete sample will be mentioned when they seem important.

The average white married woman in the sample had been married about 17 years at the first interview. Women whose marriages had already ended had been married, on average, for 10 years when disruption occurred, about 6 years before the 1967 interview. Of the currently married women over half had worked at some time during the previous year, and over 60 percent had worked within the previous five years. 3/ Those who had not worked in the last year averaged 12 years since their last job; potentially they are displaced homemakers. However, women whose marriages would end in the next five years had a higher rate of recent employment than did women who would remain married.

Black married women had been married about 16 years. Women in broken marriages had been married about 9 years before disruption. The average time since disruption was longer than for white women--about 9 years. Over three quarters of all black married women had worked within the year preceding the 1967 interview. As with white women, the employment rate for black women whose marriages would soon end was somewhat higher than was the rate for women who would remain married. Nearly 85 percent of black married women worked during the previous five years; thus, only a small percentage of black women fit the stereotype of the homemaker who has been out of the labor market for an extended period.

2/ A fourth group, women who remarried between 1967 and 1972, is not shown because of small sample size. The group that was married both years contains women who were divorced or widowed and remarried between the two dates, and the group that had disrupted marriages both years contains some women who remarried and suffered another disruption.

3/ Women who had income information at both dates had slightly higher rates of employment than did women who had missing income items. See Appendix Table A.

THE EFFECT OF MARITAL STATUS ON ECONOMIC WELFARE

Table 2 shows economic and demographic characteristics of white and black women for whom information on income was available in both 1967 and 1972. In addition to total family income, three measures of economic welfare are shown. Two of these, the percentage who were poor and the welfare ratio, use the standard definition of poverty published each year by the Current Population Survey. 4/ The welfare ratio is defined as the ratio of a family's total income to the poverty level income for a family of its size. Although the standard definition of poverty has the advantage of being widely used for policy and research, a major criticism is that poverty should be defined relative to the standard of living enjoyed by the majority of people in a society. For this purpose, relative poverty will here be defined as having a welfare ratio that falls below half the median ratio of white intact families in the sample. 5/

In both 1967 and 1972, the average family income of intact families of both races was about twice as large as that of disrupted families. However, because there are more people to be supported in intact families, the difference in the welfare ratios of the two types of family was smaller than the difference in their incomes.

Women whose marriages ended between the two years had rather large decreases in both their incomes and welfare ratios, while those whose marital status did not change had increases in both. In the former group, the percentage with income below the poverty level increased from about 10 percent to well over 25 percent for white families and from 44 percent to over 60 percent

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4/ The total income measures on the NLS tapes include the value of food stamps. In this paper food stamps have been excluded to conform to standard income and poverty definitions. It has been argued that food stamps and other in-kind payments should be counted as income. Inclusion of food stamps does cause small decreases of the percentage in poverty--ranging from virtually no change for white married couples to 4 percentage points for black formerly married women in 1972. The overall picture presented here would change very little if food stamps were counted as income.

5/ This is similar to a measure used by Plotnick and Skidmore (1975).

Table 2 Measure of Economic Welfare of Women by Marital Status, 1967 and 1972

WHITE WOMEN			
Means and Percentages	1967		
	Married Both Dates	Married 1967, not in 1972	Marriage Disrupted at Both Dates
Total income in 1966[a]	11,943	11,621	6,250
Welfare ratio	2.7	2.5	1.8
Percent poor	8.1	11.1	32.8
Percent relatively poor	10.9	14.1	38.0
Percent with children under 18	87.0	90.9	76.9
Percent in labor force[b]	46.6	53.5	70.9
	1972		
Total income in 1971	14,239	7,172	6,883
Welfare ratio	3.5	2.0	2.3
Percent poor	4.1	28.3	20.9
Percent relatively poor	10.2	41.5	39.7
Percent with children under 18	72.4	67.9	56.0
Percent in labor force[b]	55.9	78.8	78.4

(Table continued on next page.)

Table 2 Continued

BLACK WOMEN			
Means and Percentages	1967		
	Married Both Dates	Married 1967, not in 1972	Marriage Disrupted at Both Dates
Total income in 1966[a]	7,585	7,253	3,940
Welfare ratio	1.7	1.5	1.0
Percent poor	38.1	44.0	64.4
Percent relatively poor	44.0	53.3	70.3
Percent with children under 18	82.0	82.7	80.7
Percent in labor force[b]	65.1	65.3	71.3
	1972		
Total income in 1971	9,684	4,484	4,652
Welfare ratio	2.1	1.1	1.3
Percent poor	26.7	62.7	54.5
Percent relatively poor	47.2	76.0	70.3
Percent with children under 18	71.0	68.0	67.6
Percent in labor force[b]	63.3	66.7	62.4

[a] In 1971 dollars.

[b] In survey week.

for black families. Clearly these families were much worse off after the end of the marriage. Women whose marriages had ended prior to 1967 were less likely to be poor in 1972 than in 1967--the decrease in the percentage in poverty was about 10 percentage points for both races.

When relative poverty is considered, only about 10 percent of white married women had welfare ratios below half the median for all white married couples, while close to 40 percent of white women in broken marriages were below this relative poverty threshold. About 45 percent of black married couples and over 70 percent of black women whose marriages had ended were relatively poor. Unlike the decreases in absolute poverty, relative poverty remained stable or increased slightly between the two years for the groups in which marital status did not change. Marital disruption again caused large increases in the percentage who were relatively poor in both races. By either measure of poverty, black women in disrupted marriages were extremely disadvantaged compared to all other groups.

In 1967 the great majority of women in the sample had children under 18 years of age living in the household. Between 1967 and 1972 the percentage of married or formerly married women with children under 18 fell from over 80 percent to about 70 percent. By 1972, white women whose marriages had ended before 1967 were considerably less likely than the others to have children at home--less than 60 percent still had children living with them.

With decreasing responsibilities for child care, white women in all three marital status categories increased their labor force participation over the five-year period. For women whose marriages ended at this time, the increase was dramatic--from over 50 percent in 1967 to over 75 percent in 1972. In contrast, the labor force participation of black women either declined or in the case of women whose marriages were recently disrupted, remained virtually constant. 6/

6/ For a further discussion of the trends in labor force participation of black and white women, see the paper by Mott in this volume.

In Table 3, individuals in the three marital status groups are cross-classified by whether they were poor in each year. Within each race, the percentage of women who became poor in 1972 was much higher for women who had experienced a recent disruption than for either of the other groups. Over one-quarter of white women and over 40 percent of black women who had not previously been poor became so after disruption.

Among those who were already poor in 1967, women who remained married in 1972 had a much higher chance of escaping from poverty than did women who were no longer married. Less than a quarter of white married women remained poor in 1972, while about half of both black married women and white women in disrupted marriages remained poor. The chance of remaining poor was exceedingly high--about 80 percent--for black women in disrupted marriages.

Data from Table 3 can be recombined to calculate what percentage of the women who were poor in 1972 had become so since 1967. For women whose marriages ended in this period, over 80 percent of the white women who were poor in 1972 had not been poor in 1967, while only about 40 percent of black women had not previously been poor. Thus, for white women, poverty was usually a new condition following disruption, while black women had frequently been poor before disruption as well.

IS POVERTY LONG TERM OR SHORT TERM?

From data in Table 3, it can be calculated that less than 2 percent of white married couples were poor in both 1967 and 1972, while 16 percent of white women who were not married in either year were poor at both dates. About 20 percent of black couples and nearly 50 percent of black women in broken marriages were poor both times. While these figures do not necessarily mean that the families were continuously poor over the five-year period, in most cases it may be presumed that families that were poor both times were not far above the poverty level in the intervening years.

To investigate the question of persistent poverty further, Table 4 shows the poverty status of women who were not married at any of five interviews over a period

Table 3 Poverty Status in 1972 by Poverty Status in 1967, for Women by Marital Status in Both Years

WHITE WOMEN

Poverty Status in 1972	Married in Both Years		Married 1967, not in 1972		Marriage Disrupted in Both Years	
	Number	Percent	Number	Percent	Number	Percent
	Not Poor in 1967					
Poor in 1972	30	2.4	23	26.1	6	6.8
Not poor in 1972	1213	97.6	65	73.9	84	93.2
Total	1243	100.0	88	100.0	90	100.0
	Poor in 1967					
Poor in 1972	25	22.9	5	--[a]	22	50.0
Not poor in 1972	84	77.1	6	--[a]	22	50.0
Total	109	100.0	11	100.0	44	100.0

BLACK WOMEN

Poverty Status in 1972	Married in Both Years		Married 1967, not in 1972		Marriage Disrupted in Both Years	
	Number	Percent	Number	Percent	Number	Percent
	Not Poor in 1967					
Poor in 1972	19	8.3	18	42.9	11	15.3
Not poor in 1972	210	91.7	24	57.1	61	84.7
Total	229	100.0	42	100.0	72	100.0
	Poor in 1967					
Poor in 1972	80	56.3	29	87.9	99	76.2
Not poor in 1972	62	43.7	4	12.1	31	23.8
Total	142	100.0	33	100.0	130	100.0

[a] Percentage not given when base is less than 25.

Table 4 Percent of Interviews in which the Family was Poor for Women not Married at any Interview

Times Poor out of Five Interviews	WHITE WOMEN		BLACK WOMEN	
	(1)[a]	(2)[b]	(1)[a]	(2)[b]
0	50.0	61.2	15.3	28.8
1-2	23.3	22.4	18.4	26.2
3-5	26.7	16.4	66.3	45.1
N	60	152	98	233

a Includes only persons reporting income on five interviews.

b Includes total sample; persons not reporting income are assumed not to be poor.

of seven years. 7/ These are women whose marriages ended before 1967. When five interviews are used, missing data is, of course, a problem. Less than half of the sample had complete income information at all five interviews, and there is reason to believe that those who consistently reported income were on the average poorer than those who did not. 8/ To correct for possible bias from this source, two sets of figures are presented: the first includes only persons who reported income at every interview; the second includes the entire sample. In the latter, persons who did not report income are assumed to be above the poverty line. For white women, who have a low probability of being poor at any one time, this assumption will usually be correct. For black women, the assumption can be expected to cause an underestimate of the probability of being persistently poor. However, by using both estimates, upper and lower bounds may be placed on the incidence of continuing poverty.

Although most white women did not continue to be poor for a long period, about 15 to 25 percent were poor in at least three out of five interviews. A year-by-year inspection of the data showed that most of these were either below or only slightly above the poverty line at all times; very few showed continued improvement in their economic situation. Nearly 40 percent of all white women who did not remarry were poor in at least one year.

The economic position of black women was much worse. By the most conservative estimate, fewer than 30 percent of black women were above the poverty line in all years. Over 45 percent were poor in at least three years out of five. It would probably be safe to conclude that at least half were continuously poor or barely above the poverty line.

7/ It is possible that a few of these women had short-lived marriages that began and ended between one interview and the next.

8/ For black women, income on the 1967 survey was $500 less for women who reported income each time than for women who failed to report at least once; for white women the difference was only $200.

These estimates apply only to women who did not remarry over the seven-year period. If the probability of remarriage is considered, the incidence of continuing poverty after disruption would be somewhat lower than these estimates. As previously mentioned, about one fourth of white women remarried between 1967 and 1972. Remarriage was less likely to be a way out of poverty for black women than it was for white women. Only one sixth remarried, and some of these remained poor.

THE IMPORTANCE OF EARNINGS AS A SOURCE OF INCOME

What are the major sources of income for formerly married women? Support from former husbands and public transfers of various types are widely believed to be inadequate to maintain these families above the poverty level. To what extent must the women depend on their own earnings if they are to avoid being poor? In Table 5, sources of income in 1972 are shown for women who were above and below the poverty level in that year. 9/ The percentage of women receiving any income from each source is shown, together with the average amount received and the percentage of women for whom each source provided at least half of their total income.

That the employment of the woman herself is indeed the major means of avoiding poverty is demonstrated in Table 5. For both racial groups, nearly two-thirds of women who were not poor depended primarily on their own earnings, and 85 to 90 percent had some earnings during the year, an average of about $5,000 per year. This contrasts markedly with the situation of women who were poor. Only about one-quarter of the latter depended mainly on their own earnings and less than half had any earnings in the previous year.

Over 40 percent of families that were not poor had earners besides the head of household. For nearly 15 percent of black families above the poverty line, other family members' earnings was the largest source of income. Slightly under 30 percent of poor families

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9/ This table shows income source for all families that reported income in 1972, since in this case no interyear comparisons are being made.

Table 5 Sources of Income for Women with Disrupted Marriages in 1972 by Poverty Status

Source	Percent Receiving any Income from Source		Percent Receiving at Least 50 Percent of Income from Source		Average Amount Received[a]	
	WHITE WOMEN					
	Poor	Not Poor	Poor	Not Poor	Poor	Not Poor
Own earnings	42.0	90.6	24.6	64.6	1,651	5,560
Other family earnings	29.0	44.3	8.6	6.1	1,169	2,358
Private non-wage[b]	31.9	51.9	17.3	7.1	1,219	2,350
Welfare income[c]	46.4	10.4	31.8	1.0	2,044	1,644
Other public transfers[d]	23.2	35.8	14.4	10.8	1,516	2,904
No one source	--	--	3.3	10.4	--	--
	BLACK WOMEN					
Own earnings	48.2	86.1	27.3	63.2	1,648	4,915
Other family earnings	28.0	43.1	1.8	14.6	1,467	3,408
Private non-wage[b]	13.7	22.2	4.2	1.4	669	1,067
Welfare income[c]	67.3	21.5	47.0	7.0	1,961	2,729
Other public transfers[d]	31.5	30.6	13.6	7.0	1,485	1,989
No one source	--	--	6.1	6.8	--	--

[a] By those receiving any income from this source.
[b] Includes child support, trust funds and other property income.
[c] Includes AFDC and other public assistance income.
[d] Includes social security disability and dependents' allowances, unemployment compensation and other public transfers that are not means tested.

of both races also received income from other family members. Since only about 17 percent of all families had members other than children living in the household, older children must often contribute to the family's economic welfare.

Unfortunately, it is not possible to ascertain what percentage of divorced or separated women received alimony or child support, since these sources were part of a residual category on the questionnaire. Fewer poor women than nonpoor women received either child support or property income. The average amount received was considerably smaller for poor women than for those above the poverty line, yet more women who were poor depended primarily on this source. Child support and property income were received by less than 20 percent of all black families; the amounts received were small and were seldom a major portion of total income.

Nearly one-third of white families and nearly one-half of black families that were poor depended primarily on welfare income. Nearly one-half of poor white families received some welfare income, as did two-thirds of poor black families. About one-third of all families of formerly married women received other public transfers such as social security dependents' allowances or unemployment compensation. This was a major source of income for approximately 10 percent of both white and black women, most of whom were widows.

In Table 6, the data from Table 5 are rearranged to show the percentage of women with each major source of income who were poor. As expected, most women who depended primarily on welfare income were poor. The probability of being poor was much lower for white women who depended primarily on their own earnings than it was for those depending on either public transfers or other private sources of income. To underscore the importance of the woman's own earnings, fully two-thirds of white women with no earnings were poor. Black women who depended on their own earnings were much less likely to be poor than were those who depended on public transfers. Those who depended on other private sources, mainly other family members' earnings, had a slightly lower percentage in poverty

Table 6 Percent Poor by Major Source of Income for Women with Disrupted Marriages in 1972

Major Source	WHITE Women	BLACK Women
Own earnings	11.0	33.6
Other private[a] income	39.1	30.3
Welfare income	91.7	88.8
Other public transfers	30.3	69.7
Respondent has no earnings	66.7	81.3
Total	24.6	53.8

[a] Other family members' earnings or private non-wage income.

than did those depending on any other sources. 10/ Although black women who worked still had a relatively high risk of being poor, those who did not work had little chance of escaping from poverty.

CONCLUSION

The probability of becoming poor in our society is markedly increased by marital disruption. In the present study, most women had been married for ten to 20 years and had children at home when their marriages came to an end. The end of the marriage caused a decline in the average economic welfare of the families involved. Using the standard definition of poverty, about one white family out of four became poor after marital disruption. Using a measure of relative poverty, nearly 40 percent were significantly deprived compared with their married counterparts. About 40 percent of all white women who did not remarry over a seven-year period were poor at least once; probably 15 to 20 percent were continuously poor or close to poverty. The situation of white women whose marriages end is, thus, one of relative disadvantage compared to that of women who remain married. The probability of remaining poor is not high, partly because many women remarry. Nevertheless, among those who do not remarry, many women are economically deprived.

The situation of black women is far worse. The double disadvantage of being black and female makes black women with disrupted marriages the most deprived group in our society. At any one time, 55 to 60 percent of the sample studied were poor by the standard definition, and 70 percent were relatively poor. If they did not remarry, the probability that they would remain poor was high. At least 45 percent, and probably well over 50 percent, were poor over most of the period covered by the interviews. Probably one-quarter, or fewer, managed to stay out of poverty entirely.

The major sources of income of women who head families suggest that few of them have escaped from poverty through public transfers in the past. It is hard to imagine that welfare reform will change this,

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10/ The number of black women in the sample who depended on others' earnings or other private income was small. Therefore, the reliability of this estimate is not high.

although it may ease the way for some. I believe that most women who must raise families alone will need to work if they are to give their children an adequate start in life. It seems desirable, therefore, that women with few marketable skills have access to training programs.

Is special legislation for displaced homemakers warranted? Women who are on welfare have access to training through the Work Incentive Program; others who are ineligible or who do not wish to apply for welfare may not fit into existing programs designed especially for younger workers or males. 11/ A special program is probably needed, but any such program should not define "displaced homemaker" too narrowly. The legislation currently being proposed would apply only to women who are at least 40 years old. The data presented here suggests that this age limit is too high. Many formerly married women in their thirties have financial problems and training needs similar to those of older women. Although the language of the legislation is vague concerning the length of time a woman must have devoted to homemaking to qualify as a displaced homemaker, I believe that present earnings capacity rather than time out of the labor market should be the major criterion for eligibility. Of the women in this study whose marriages ended after 1967, only 30 percent of the white and 15 percent of the black women had not worked in the five years before that time. These may indeed be the women most likely to become poor. Nevertheless, women who did work, but at jobs that are inadequate for the support of a family, should not be excluded from training for better skills.

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11/ In testimony before the House Subcommittee on Employment Opportunities, which is considering making the displaced homemaker program part of CETA, witnesses expressed concern that current CETA programs are not attuned to the problems of older women who are returning to the labor market. (See The Bureau of National Affairs, 1977.)

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APPENDIX

Biases in the Income Data

A major problem in analyzing poverty with the NLS data is the high rate of nonresponse on income. Income information was obtained by asking approximately 30 questions on income from various sources. A missing value on any one of these questions causes total income to be missing. In 1967, 20 percent, and in 1972 one-third, of all interviews have missing income information. When income at two dates is looked at, the probability that income will be missing at least once is greater still--about 45 percent. In order to compare the welfare of families over time, it is desirable to use the same sample throughout the analysis. Yet, if missing income information is not randomly distributed, the analysis will be biased by the exclusion of all families that have income missing at either date. In fact, it is probable that total income tends to be missing more frequently when income is high than when it is low (see Lapham, undated). The most important items that are frequently missing are interest and dividend income, earnings of family members other than husband or wife, and husband's earnings. The first especially is much more likely to be missing in high-income families than in low-income families, which usually have little or none of this type of income. More married women than formerly married or single women have missing income information.

As shown in Table A, differences are generally not large between the continuous sample for which income is available at both dates and the separate samples that would be used in each year if all who had income in the particular year were included. Therefore, the continuous sample will be used except when a different one is specifically mentioned. The bias, if any, in this choice is probably toward overstating the incidence of poverty, especially for married couples and for black women with disrupted marriages. For white women with disrupted marriages, differences between income in the two samples are small; income is not consistently higher in the entire sample than in the continuous sample.

The figures on the incidence of poverty reported here are not substantially higher than those shown in other reports. For example, Current Population Reports in 1972 estimates that 25.7 percent of white female heads and 56.7 percent of black female heads aged 35 to 44 were poor, while the percentages for ages 45 to 54 are 17.0 and 40.5. Estimates from the NLS continuous sample are 24.0 and 56.6 for ages 35 to 49. The problem of general underreporting of income, which is probably common to all surveys, leads to additional upward bias in estimates of the percentage of poor. See Budd and Radner in Smith, ed. (1975). As a comparison of the relative economic status of different groups, there is perhaps less reason to believe that the results are biased.

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Table A Comparison of Total Sample, All Respondents Reporting Income in 1972, and Respondents Reporting Income in 1967 and 1972: Selected Characteristics in 1972

	Married Both Years	Married 1967, Not Married 1972	Marriage Disrupted at Both Years
		WHITE WOMEN	
Sample size			
Total sample	2590	173	196
With income in 1972	1645	125	156
With income both years	1352	99	134
Total income			
With income in 1972	14,651	7,222	6,753
With income both years	14,239	7,172	6,883
Percent poor			
With income in 1972	4.0	29.6	23.1
With income both years	4.1	28.3	20.9
Percent in labor force			
Total sample	52.1	72.8	76.0
With income both years	55.9	78.8	78.4

(Table continued on next page.)

Table A Continued

	Married Both Years	Married 1967, Not Married 1972	Marriage Disrupted at Both Years
BLACK WOMEN			
Sample size			
Total sample	651	115	283
With income in 1972	434	88	225
With income both years	373	75	202
Total income			
With income in 1972	9,802	4,525	4,871
With income both years	9,684	4,484	4,652
Percent poor			
With income in 1972	26.0	62.5	51.6
With income both years	26.7	62.7	54.5
Percent in labor force			
Total sample	62.2	62.6	64.0
With income both years	63.3	66.7	62.4

DISCUSSANT REMARKS

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The subject of this session is the relationship between women's employment and family roles--certainly one of the most important issues to be considered when discussing female labor force participation in the United States today. In my discussion, rather than focusing on one or two problems, I will try to briefly touch on many questions that have concerned researchers and policymakers in this area. I hope we can consider some of these topics in more detail today at this conference and later in our work. Let me begin by reviewing the three papers that we have just heard presented. Concern with women's and men's attitudes toward employment and their effect on actual labor market decisions of women is fairly recent. These attitudes have generally been neglected in both sociological and economic models of female labor force participation. But the research by Macke, Hudis, and Larrick shows clearly that women's sex-role attitudes affect their later work decisions, as do their perceptions of their husbands' views on their employment. Although we know little about recent changes in support by men for work by their wives, we do know that women's attitudes have become more favorable to employment in the last 15 years. The long-term implications of these results are substantial, and the authors have reviewed them thoroughly, so I won't reiterate.

But let me mention some changes in attitudes that may occur with shifting patterns of female labor force participation. Macke, Hudis, and Larrick mention that early employment experience leads to less traditional attitudes toward sex roles. As more women work most of their lives and as most families have two earners, beliefs about men's traditional role as breadwinner may change, and more people may come to believe that women have as much right to work as men. The consequences of female unemployment for families may be reevaluated. As fewer women leave the labor force permanently or for an extended period at their marriage or the birth of their first child, beliefs about women being poor investments for on-the-job training and promotion should decrease. Macke, Hudis, and Larrick find that attitudes of husbands toward their own wife's employment are important determinants of her later market activity. The impact of married women's participation on changes in their husband's attitudes should also be explored. And we know virtually nothing about attitudes of men toward work by women in general. In fact, the whole area of attitudes, beliefs, values, and tastes of men and women for employment under a variety of conditions is unexplored territory that, I believe, will give us substantial insights into who works, when, and why. This research by Macke, Hudis, and Larrick is an important beginning in our explorations of these issues, and as Herbert Parnes pointed out earlier, an excellent exploration of the longitudinal nature of these data.

Certainly if one is discussing family roles, the breakdown of those roles that occurs with divorce or separation, and the part played in this breakdown by employment of the woman, are central concerns. Half of all female-headed families exist as a consequence of divorce or separation, and one-third of these families headed by women were at or below the poverty level in 1975, compared to one in 20 families headed by men (Brown, 1976). So Cherlin's research on the economic and labor force predictors of marital dissolution addresses a crucial issue with a myriad of implications for labor and welfare policy. This analysis is carefully and imaginatively done, and the results are interesting and informative. Cherlin finds that stability of husband's income decreases the probability of marriage breakup, while high earnings of the wife relative to the husband increased this likelihood.

But we must be careful in drawing implications from this research for public policies that might reduce divorce and separation. I suspect no one at this conference would advocate reducing women's wages to make them economically more dependent on men and therefore less likely to divorce. If relatively high earnings allow women and men to dissolve unfulfilling relationships, it would be hard to argue that this effect should be reduced or eliminated. But Cherlin's suggestion that employment of married women, especially those with children at home, increases marital strain is certainly true for some proportion of all families, and income uncertainty appears to have a powerful effect on disruption. Cherlin has presented several excellent suggestions for policies to ease the strain on two-earner families with children. I would like to return to these in a moment.

But first, I would like to review the Shaw paper, which takes up where Cherlin leaves off--with the economic aftermath of the end of a marriage. Shaw's findings are strikingly clear, and corroborate other work that indicates that this event substantially worsens the economic position of many women while often improving the financial situation of their ex-husbands (Hoffman, 1977). This decline in economic well-being is often severe and sustained, Shaw points out. But the finding of this research that most struck me was the tremendous economic hardship faced by black separated, divorced, or widowed women. About three-quarters of these women were relatively poor in 1972, and the majority were beneath the poverty threshold. Approximately two-thirds of these women were in the labor force, and about half of those who were classified as poor had some earnings. It is difficult to untangle the exact cause of this situation from the information presented by Shaw, but we can speculate.

When a typical marriage dissolves, almost always the individual with the highest, and often the only, income leaves, and in most cases after a short time is making very little financial contribution to his former wife and children. Two-thirds of these separated, divorced, and widowed women in the NLS had children under 18 in 1972 for whom they were financially responsible. Low average earnings of these women, the majority of whom had dependent children, combined with the loss of the usually-much-higher earnings of their husbands, means financial hardship in many cases. Part of the problem is clearly that many working women, especially black women, do not make adequate wages to keep their families out of poverty. Lack of work experience, discontinuities of employment, exclusion from "good" jobs, lack of on-the-job training, and discrimination have all been blamed for the much lower earnings of women than of men with comparable characteristics. To increase wages of women workers, we need more information about the roles of each of these factors. The Fligstein and Wolf paper, which you will hear later in this conference, attempts to clarify one of these issues. Shaw's findings on the poverty among working women might also be due to the fact that a fairly high proportion of black women in the labor force in this sample are unemployed. We can't tell from the information presented. But it is not clear why Shaw finds that such a high proportion of separated, divorced, and widowed women of both races are not in the labor force at all. Is it because they choose not to work, perhaps because of home responsibilities? Health problems limit the employment of a substantial minority of the NLS mature women. Perhaps this is part of the explanation. How many have become discouraged workers, convinced that there is no point in looking for work because none is available? To develop and implement public policies that would improve this situation, we must have the answers to these questions. The problem of women who are among the working poor can be alleviated by decreasing the impact of discrimination by race and gender and by opening good jobs to these women, perhaps through job training. Thirteen percent of the white but 50 percent of the black women who had at least one preschool-aged child in the NLS survey and who were not in the labor force, said they would look for work if free, convenient, good day care were available (Shortlidge, 1975). The problem of child care is especially acute for no-longer-married women, and some system of reimbursement for the cost of this care might allow many to take employment. Cherlin's suggestion of more flexibility in work schedules, both hours and days, would be a great help to these women also. And some system of insured child support payments from absent fathers would certainly improve the economic situation of female family heads. Perhaps these men could be taxed through a payroll deduction system similar to social security, and payment be distributed through a similar agency for support of the children.

The issue of marriage breakup, its causes and results, is clearly a knotty one, which these two papers help us to better understand and perhaps eventually, to deal with. But there are many other questions about work and family life that could not be represented by papers in this conference. I would like to briefly identify some questions that I feel deserve further attention. Hawley and Bielby have just reviewed the research on the work-family relationship for women that has been done with the NLS mature women data.

The connection between work and childbearing is an important one for women, especially now that most women are employed for much of their lives and the vast majority of them have children. The research that has been done on this topic includes analysis of the impact of beginning a family at very young ages on the later education, occupation, labor force participation, and welfare dependency of the woman. The effect of early childbearing on later work and the effect of early labor force participation on later family-building are being explored. Some of my own work indicates that young women who plan to hold a job later in their lives also expect families about one child smaller than do those who have no plans for later employment. Several analyses have explored arrangements made by working mothers for the care of their children. I'm sure I have missed some research that Hawley and Bielby have uncovered, but the point is that much valuable work has been done on this topic with the NLS data. A good deal more has been done with the other NLS panels, especially the young women.

But much remains to be done. We know little about the process of remarriage and how it affects and is affected by the employment of the woman. As we have seen, remarriage may be a way out of poverty for many women, and the factors that influence it should be explored. Decisions about when and whom to marry, and if and when to have children, are all determined by and determine to some extent work plans and experiences. I understand that Professor Cherlin is working on this question now. How women with plans for long-run labor force participation, for "careers," integrate these plans with marriage and family has not been systematically studied. The relationship between family constraints such as presence of young children and job choices, hours, pay, location, and job satisfaction, deserves consideration. If we knew what job characteristics were most important to women and how the family situation influences them, then programs designed to ease employment of mothers could be implemented. Lastly, all the evidence seems to indicate that labor force participation is fundamentally different for black than for white women. Racial differences in the determinants of employment, and especially in the family-work relationship, deserve immediate consideration, especially given the economic situation of many black women.

How could research on these issues help policymakers? First, it is clear that work, childbearing, and marriage breakup decisions almost completely determine the extent of welfare dependency. Early out-of-wedlock childbearing is a major cause of female-headed families and welfare dependency (Moore and Caldwell, 1976). If we could understand and avert this event, the increase in well-being of these young women could be substantial. Macke, Hudis, and Larrick point out that youth unemployment might have a profound influence on the sex-role attitudes and thereby on later employment and welfare dependency. Programs for improving the economic situation of women who head families depend on an understanding of the factors that cause poverty, unemployment, and inadequate earnings. Decisions about day care programs for women in poverty who want job training, or who want to work, must be made on the basis of a knowledge of the needs of the women involved. Many government agencies are considering, or have implemented, flexible work schedules for their employees, but part-time work is still often difficult for women to arrange and virtually forbidden to men. How many families would choose part-day or part-week work for one or both earners if the option were available? In these times of high unemployment it seems unreasonable to force employees to work more than they want to when there are lots of people who want and need the employment. Also, as lifetime labor force participation becomes as typical for women as it now is for men, fundamental reforms of welfare and pension systems will be required. Both these systems assume one worker who is responsible for at least one other person. Thus, under the present social security system, the woman who holds a job all her life and contributes to the system derives almost no benefits at all. Certainly these and other questions that plague policymakers could be better addressed if high-quality research on work and family roles is available.

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DISCUSSANT REMARKS

by

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In the 1920s, after observing the work patterns of the husbands and wives of Middletown, the Lynds asked in their now-classic study, "Why do they work so hard?".[1] Perhaps this question is even more relevant today for researchers who look at the National Longitudinal Survey of middle-aged women, since a majority of these women are working long hours at the dual jobs of homemaking and paid work during some portion of the period surveyed. When a wife engages in paid work, we know from time budget studies that her work week increases dramatically. For example, when a wife with two children has a market job of 34 hours per week, she will average a total work week of 81 hours: 34 hours paid work, 6 more unpaid hours associated with her job, and 41 hours of work devoted to running the home and caring for the children.[2] This long week encompasses 23 more hours of work than does the average week of the wife with two children who works exclusively in the home. Furthermore, the husbands of working wives do little to relieve their wives of the burden of having two jobs. As more and more wives are joining the labor force, we should ask in what ways their work activities affect these women and their families.

The three papers. This session has looked specifically at how women in mid-life deal with their dual work and family roles. This broad question has been explored indirectly in the three papers by analyzing the observed interactions between employment and household composition. The following three questions were addressed: What is the dynamic relationship between sex-role attitudes and employment among women? What is the impact of women's work activities on the probability that their marriages will break up? If their marriages do dissolve, what happens to their standard of living? The answer to the first question is that the relationship between attitudes and actions when it comes to married women working is tenuous at best. A wife's attitude toward working wives is not a good predictor of whether she works or stays home; yet whether the wife has worked in the recent past is a good predictor of future market work. Work begets work, and in the meantime the working wife's attitudes about working wives seem to adjust toward greater acceptance. But I think that the role of attitudes as a force of change in the work activities of women is overstated. Instead of leading to future change, these attitudinal changes seem to reflect a woman's breaking away from societal expectations of her role as a mother and housewife and her confrontation with her guilt about her own activities. At a more basic level, we need to ask: How do these women who are behaving in a way that they perceive as being against societal norms arrive at the point where they leave the household to take a paid job? How detrimental is their guilt to their ability to function as workers and as family members, and what impact does their ambivalence have upon their families?

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[1] Robert S. Lynd and Helen Merrill Lynd, Middletown, Harcourt, Brace, and World, New York, 1929, chap. 8.

[2] Kathryn E. Walker and Margaret E. Woods, Time Use: A Measure of Household Production of Family Goods and Services, American Home Economics Association, Washington, D. C., 1976, Table 7.

One of the more interesting facts emerging from Macke, Hudis, and Larrick's paper is the homogeneity of the response about sex-role attitudes among these women--white and black, young and middle-aged. 3/ The uniformity of response should perhaps give us pause before we accept wholeheartedly this type of question

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3/ The average values of the measure of "initial sex-role nontraditionality" ranged from 9.6 for younger white women to 10.7 for older black women. The standard deviation as a proportion of the mean value is .25 for white older women, .23 for black older women, .26 for white younger women, and .22 for black younger women. This is considerably less than the relative variation exhibited by the variables for extent of employment, income, number of children, job training, and mother's work history. Of course, part of the variation has been lost by using the average of responses to various questions.

in an impersonal interview situation with simple direct questioning about issues that may be emotionally charged and complex for the respondent. The answers seem to reflect an "accepted" response rather than the person's own feelings about the question. Perhaps we should focus upon the groups that display a conflict between their attitudinal response about married women working and their own work behavior. There are two such groups: those who work but think that a woman's place is in the home or that a wife who carries out her full family responsibilities doesn't have time for outside employment (27 to 42 percent of those employed); and those who do not work but think that employment of both parents is necessary to keep up with the high cost of living or that modern conveniences permit work without neglecting the family (46 to 74 percent of the nonemployed). 4/ Such contradictions may reflect a conflict within the woman or a conflict with her husband or other family members. But the recitation of an "acceptable" answer that contradicts the woman's own actions should indicate some necessity for the woman's dealing with the issue, even if her husband's attitudes are in line with her own actions. Focusing upon the groups that display conflict should help us study the fundamental questions of why and how the attitudes of men and women toward paid female labor will change in the future. The Macke, Hudis, and Larrick paper does point out that if a woman's actions and her perceptions of how she should act are in conflict, her attitudes adjust toward being in closer harmony with her actions.

Cherlin's paper looks at the impact of a married woman's working on the possibility of her marriage dissolving. I found his results somewhat difficult to interpret for policy purposes because the effects of the husband's employment situation were not clearly distinguished from the actual or the potential work activities of the wife. Muddling the picture even more was the problem that the sample was not standardized by income levels, so that it was unclear what the

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4/ Frank L. Mott, "The NLS Mature Women's Cohort: A Socioeconomic Overview," this volume, Table 14a.

economic variables in the analysis represented. 5/ With these caveats, the results support the following picture: More weeks spent in market work by the husband decrease the probability of a marriage dissolving, but the number of weeks worked by the wife do not affect the outcome. And the more unequal the husband's wage relative to his wife's expected or actual wage, the greater the probability that the marriage will last. Perhaps another way to phrase this is to confess that an economic dictatorship helps preserve the family. Doubtless this is true, but then we must ask if this type of marriage relationship is worth saving. Today women face new opportunities for achieving greater economic independence by entering paid employment, which is a necessity for surviving in our highly money-oriented economy. When many women choose these new alternatives, we must accept the outcome as being preferable to the traditional marriage. Yet as these changes occur, we should be concerned about the resulting strains upon the family during a period of transition, when people are not certain about the roles expected of them or of the options available to them. After saying all of this, I must point out that Cherlin's paper indicates that for middle-aged couples, the possibility of economic independence for the wife does not have a very great effect on the breaking up of the marriage. The more likely impact may be on the way the partners operate within the marriage, which cannot be observed in the data. Perhaps a lesson to be learned from this and other attempts to predict marital dissolution from economic variables is the important recognition that these factors seem to play a minor role in the outcome of most marriages.

Shaw turns her attention to a question that is more clearly economic in nature by asking what happens to a woman's standard of living when her marriage ends. The answer has dynamic elements, but the general economic situation of nonmarried women is such that

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5/ The economic variables include number of weeks worked by husband in 1966, number of weeks worked by wife in 1966, and the actual or expected hourly wage of wife in 1967 divided by actual or expected wage of husband. Earnings or income do not appear in the regression, so the weeks worked by the husband may be acting as a proxy for his earnings.

they face a substantial chance of being in poverty if they are caring for dependent children alone, and they face economic deprivation under any circumstances. Since it takes additional resources for the father to set up a household separate from the mother and children, the living standard of all members of the family would be expected to decline when a family splits up. But the decline in the economic conditions of the estranged wife and children depends in large measure on the change in the economic conditions of the husband, who is conspicuous in his absence from Shaw's discussion. But other studies have indicated that the economic conditions of the man decrease less than do the economic conditions of the woman (and the children) upon the dissolution of their marriage. 6/ Shaw's dire picture of the economic plight of the divorced or separated woman stems from three sources: the low wages earned by most women in the labor market, the lack of equitable support payments from the absent father (or the government if he is not alive or if he is impoverished), and the time commitments necessary to run the home when children are present. Few women are resourceful enough by themselves to provide the time necessary for household chores and emotional support of family members and also to work enough hours to earn the income necessary to provide a family with a comfortable standard of living. 7/ Along with these economic problems, divorce also brings psychological problems. For these reasons, family dissolution should be viewed as a traumatic and difficult process for the people involved, and it occurs, especially when children are present, because the family can no longer function as a unit. As Shaw's results show, the women involved suffer grave economic penalties for becoming separated or divorced: approximately 50 percent of the white women and 80 percent of the black women are poor at least one year out of the first seven years after divorce or separation if they do not remarry, and 10 to 20 percent of the white women and 30 to 40 percent of the black women experience continuous poverty. In addition, large relative

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6/ See Isabel V. Sawhill, "Developing Normative Standards for Child Support Payments and Alimony," Urban Institute Working Paper, Summer 1977.

7/ See Clair Vickery, "The Time-Poor: A New Look at Poverty," Journal of Human Resources, Winter 1977.

income declines are experienced by most of the women. Some relief from their economic plight can take several forms: a decent paying job (if their household responsibilities are not too great), the children leaving to set up their own households, the older children taking jobs, or the formation of a new household by their remarrying or their living with relatives or friends. Unfortunately, most single women with children face low wages or low welfare payments until they gain access to higher income through remarriage. For them, economic independence is a myth.

The uses of longitudinal data. The Shaw paper is a fine example of how simple cross-tabulations of important variables can greatly increase our understanding of individuals' situations. Her tables show that attempting to stereotype married working women can be a perilous task at best. The divorced or separated woman cannot be neatly catalogued, either as a "displaced" homemaker with no market skills or as an "economically independent" breadwinner, because the individual situations of these women display a wide range of labor market experience. In my mind, one of the major benefits of these data sets is the replacement of many of the simplistic myths concerning women workers with the realization of the complexity of the situation. Certainly, this realization should be a major step forward in our ability as social scientists to tell the policymakers what proportion of the population would be aided by a certain policy and what proportion would be unaffected or hurt. An increased understanding of the complexity of the situation--such as the range of work experience and the household responsibilities of divorced or separated wives--should help us to formulate a range of programs that specifically take into account the diversity of the targeted populations.

The ability to target specific government programs to a group of people with special characteristics enables the government to minimize the cost of fulfilling certain goals. The longitudinal data should be helpful in analyzing policies targeted to certain groups if the target population is large enough to show up randomly in the sample or if the target population is oversampled, so that enough cases are interviewed to be analyzed. For example, enough of the women surveyed experienced a dissolution of their marriage during the period surveyed to enable us to begin a study of them as a group. But stratification of the group according to income and race results in many of the cells being too small to analyze separately. If we want to look at particular groups, such as the less-educated, rural families, large families, or single women, then we must designate these groups ahead of time as important and then insure that there are enough of them sampled to allow generalizations to be drawn about them. This approach will allow us to make more efficient use of a given sample size in applying the data to policy analysis.

The major contribution of longitudinal data is that it allows us to focus on the process of change, so that we can begin to understand how our society evolves from one snapshot picture to another. But understanding the process of change involves more than describing a series of snapshots, one taken each year like the family pictures at Thanksgiving. We must be able to describe why these changes occurred as well as the ways in which these changes were undertaken. Because the process is a complex one that includes forces that cannot be quantified (or sometimes even described by the individuals involved), social scientists sometimes have to, first, explain what they can with the quantifiable variables, and then must hypothesize about the unobserved (and perhaps more important) forces at work. Under these circumstances, we should exercise restraint in attempting to explain situations such as family formation or dissolution as primarily economic phenomena. To focus upon economic forces when they are unimportant will retard our progress in unraveling the actual forces at work. The NLS data have already advanced our knowledge of the family and the work situation of mature women in the pictures they have drawn. More detailed analyses of the data will further increase our understanding, but we should not lose sight of the important issues in our attempts to mine the data. The value of the data may come more from the insights shed on the diversities of the situations faced by these women in their work and home life, rather than from stripping their situations down to the bare essentials in order to quantify the relationships between a set of crude measurements of work and family life.

Future research questions. In my opinion, the major question we should address is, Why do women engage in paid work in addition to their household work and how does this affect their own and their family's welfare? We cannot divorce a woman's work decision from the other activities in the household, just as we cannot separate the woman's employment activities from what she is producing in the home versus what she is buying with her paycheck. This data set documents that women work for a variety of reasons, including working to purchase the basic necessities for their families, working for purposes of self-definition and satisfaction, and working in order to buy the "extras" that the husband's income does not allow. In order for the wife's earnings to be an important source of income, the family need not be poor and the woman need not be the primary earner. Needless to say, most families with working wives value the wife's addition to income just as families with a full-time homemaker value the wages from the husband's second half of the work week. But economic necessity should not be the sole criteria for judging whether the unemployment problems of women or men warrant government action, and self-fulfillment should not be confined to work for men and childrearing for women.

One important characteristic of the current situation of working wives is that many are "voluntarily" working long hours in order to do both their market work and household chores. Although the childrearing responsibilities of older women decline as their children become older, women continue to devote long hours to running their households in terms of providing meals and clean clothes as well as emotional support. In addition to the employed wife's having two jobs, she is penalized in her market job whenever she makes adjustments in that job in order to accommodate her husband's schedule or to respond to other demands made by her family. An ongoing study by Cynthia Rence shows that women who quit their jobs for "family-related" reasons are analogous in their likelihood of leaving the labor market or of finding a higher wage job to women who lose their jobs. Both groups fared worse than did the women who quit their jobs for "job-related" reasons. 8/

8/ Cynthia Rence, "Effects of Job Changes on Earnings and Time Allocation for Women," Working Paper in Economics, University of California at Berkeley, 1977.

The current situation indicates that the changing work roles for women have had little impact on the work roles of men. The dual jobs undertaken by many wives place a heavy burden upon them that may cause some conflict within the family, but there is little indication that a change in these unequal work roles is at hand. As policymakers concerned with the future of the family, perhaps we should inquire into what ways the government interferes with the parents' ability to create a satisfactory home life and a secure and loving environment in which they can raise children and provide for the material and psychological needs of the family members. As we witness increasing numbers of the population living in nontraditional families, we should try to understand why these nontraditional patterns have emerged and how well these new living arrangements fulfill the members' needs. Although no widely accepted alternative to the nuclear family has emerged in the wide array of household types, that does not mean that the nuclear family remains the best family formation for all people. Thus, when we undertake studies on the dissolution of the contemporary family structure, we must consider under what conditions that dissolution is to be viewed as socially beneficial or harmful. Is this a painful, short-run process that will eventually result in the improvement of the lives of the people involved? Under what conditions are there long-run effects that are detrimental to the children and adults involved? In those cases in which such family disintegration does have a negative impact on the members, we must ask if the situation can be improved by instituting policies that would inhibit the dissolution from occurring or that would encourage family formations that better fulfill the needs of the family members.

Finally, let us consider the ways in which the strains encountered by two-earner families could be alleviated. Policies intended to lessen the burdens on working mothers have usually emphasized day care centers or part-time jobs as the solution. Yet this approach does not get at the root of the problem, that is, the unequal work roles assigned to women and men. A direct approach to the problem, such as federally-sponsored child care, can relieve some of the burdens of working women. But here again a more fundamental change must occur, for only when the "man of the house" demonstrates a willingness to share in childrearing and household chores will an equitable situation exist between the parents. The NLS data lead me to believe that we are in a period of transition. As women understand more clearly their own motives for taking a job outside the home and as they begin to feel less ambivalent and guilty about doing so, they should begin to demand that the work within the home be shared more equitably among the family members. And as men begin to share household work, it is to be hoped that we will witness a decline in the paid market work of both husbands and wives through a decline in the work week.

Some of these changes should occur as the natural result of the demand by wives for a more equal division of labor. The alternative is a continually growing number of harried mothers working long hours each week in their dual careers.

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IV. HOW WOMEN FARE IN THE LABOR MARKET

INTRODUCTORY REMARKS

by

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The Fligstein-Wolf paper addresses the general question of measuring discrimination against women in the labor market. The paper raises the important question of how to measure achievement or status in the labor market. Economists have mainly used earnings or wage rates, but these variables have the shortcomings of not directly capturing nonpecuniary aspects of the job and of not always measuring "permanent" or "normal" earnings or wage rates. The sociological variable socioeconomic status (SES), as developed by Otis Dudley Duncan, offers an alternative measure that, in principle, corrects for both of these faults of the earnings-wage variable. In practice, the variable does not seem to be fully satisfactory, as noted below and, in particular, as developed in the Fligstein-Wolf paper.

Although Fligstein and Wolf raise this important question of measuring labor market status, their paper mainly deals with methodological issues that primarily interest fellow sociologists. The specific question they pose is why studies of discrimination that look at wage differentials or at occupational segregation invariably find considerable discrimination, whereas the "status attainment literature produces seemingly paradoxical findings"--namely, that men and women have nearly equal SES in the labor market; and also that the variables affecting SES operate in about the same way for men and women.

Consider two alternative interpretations of these findings: (1) that SES is validly measuring prestige and other nonpecuniary aspects of employment and thus correctly adjusts upward the observed poorer wage and earnings position of women's employment relative to men's; (2) that whatever validity SES has in measuring employment outcomes within sexes, it is simply not a good measure of employment status between the sexes.

Fligstein and Wolf offer some comments at the end of their paper that lean toward the second alternative, and I agree, but I have no expertise on the question. However, their comment about the "white collar bias" of the SES, which is a major reason women's jobs get relatively high scores, may not be a "bias" if one wants to give large positive "weights" to various nonpecuniary aspects--being physically easy, clean, and safe, having relatively pleasant working conditions, and so on. However, we do not know much about people's knowledge of these nonpecuniary aspects nor about how they weigh them in their prestige rankings. In the presence of so much ignorance, I am willing to place more emphasis on wages, earnings, employment stability, promotion possibilities, and other such factors, which are at least measured in units that are widely understood and used. The SES is not used by the general public, and even technicians outside of sociology have little understanding of the measure.

There is another reason, in addition to the narrowness of the metric used, that the Fligstein-Wolf analysis does not teach us much. Their proposed reconciliation of the conflict between SES and other measures of labor market status is intuitively implausible. They state on page 246 that the reconciliation may lie in the fact that the SES studies are restricted to employed women. But so are studies of wage discrimination and occupational segregation. Economists do not assign a zero wage to women who are not employed, such as housewives. Rather, they compare employed women with employed men. Thus, the motivation for attempting to measure the selection bias in samples that use only employed women, whatever value this has in its own right, cannot possibly reconcile the disparate findings of the SES and wage studies about discrimination.

Finally, I argue that, although the attempt by Fligstein and Wolf to correct for selection bias produces no different results in their SES model, this does not mean that the bias does not exist nor that it is inconsequential. Whatever the outcome of ultimate interest--SES, wages, or earnings--the technique can work only if the model measures a set of variables that are important selection variables and at the same time are not important effects regarding the outcomes in question. It is often difficult to find such variables, and I believe the Fligstein-Wolf study is particularly weak in this regard. Given that the variables the authors use to "identify" the selectivity process are few in number and weak in explanatory power, we may judge that their application of the method, and not the method itself, fails.

The Blau paper examines the level of local unemployment rates on: (1) the probability that wives who are not in the labor force (NLF) enter the labor force during a one year period, and (2) the probability that wives who are in the labor force exit during that year. The general conclusion is that the unemployment rate has a significant negative effect on white wives' entry probabilities and a significant positive effect on black wives' entry rates. Thus, with higher unemployment, white wives are "discouraged," black wives are "added." The regression coefficients of local unemployment rates on exits are statistically insignificant, but their signs support the "discouraged" and "added" effects for white and blacks, respectively. A useful contribution is the use of gross flow data--actual entries and exits.

The finding that the added worker effect predominates for black wives is a new finding, since most of the previous work either found no significant effect or merely a weaker (relatives to whites) discouraged effect. (See Mooney for results that claimed that the discouraged effect was larger for blacks.) 1/ However, given the small sample size for blacks--only 24 wives entered and 21 exited--and the weak statistical significance for the finding, perhaps not too much should be made of this.

My other comments are brief.

1. Local unemployment rates are notoriously poorly measured, except for large SMSAs. However, if the errors in measurement are random, the findings of statistical significance for whites is even more impressive. More information should be given on the localities, the distribution of unemployment rates, and how they were derived.

1/ Joseph D. Mooney, "Urban Poverty and Labor Force Participation," American Economic Review (March 1967), pp. 104-19.

2. Should the change in unemployment conditions be included as an independent variable? The question originally raised by Mincer (1966) and later by Fleisher and Rhodes (1976) 2/ is whether "other" characteristics of the localities are responsible for both the prevailing levels of unemployment and labor force behavior. Using the change in unemployment would test this alternative explanation.

3. The main theoretical basis of the "added worker" effect has to do with the loss of jobs and earnings by family members in the household in which the worker--in this case, the wife--lives. However, this aspect of the problem is not discussed or even mentioned. What if the income of the black families was relatively unchanged during the year under study? What meaning would we attach to the "added worker" behavior of the black wives? (That is, we do not assume that high unemployment is attractive to them, so what would explain their response?)

4. In interpreting the results of other variables we should not forget the fact that because long-run (or previous) labor supply is already held constant in the model, the labor supply effects of many of the variables may already have been manifest. For example, education and children may significantly affect labor supply generally, but it is not surprising that they are insignificant regarding the one year change in labor supply.

5. It is difficult to interpret several of the independent variables: (a) health is definitionally related to labor supply and is uninterpretable as defined; (b) family income should be checked for work-conditional income components; (c) the change in marital status and the variable measuring the change in children-present are probably too endogenous to be considered proper right-hand-side variables.

2/ Citations to Mincer and to Fleisher and Rhodes are provided in Blau's paper.

6. Although these sample sizes may be too small, it would be interesting to see if there are differences in this model for entrants who become employed versus entrants who become unemployed and for exits who were employed versus unemployed.

7. The normative statement in the second-to-last paragraph of the paper seems unwarranted for two reasons: (a) it implies a superiority of market work over nonmarket uses of wives' time; and (b) only the timing decisions may be affected by the cycle, and, therefore, long-run employment and earnings may be unaffected.

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HOW CAN WE EXPLAIN THE APPARENT SEX SIMILARITIES IN OCCUPATIONAL STATUS ATTAINMENT?

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BACKGROUND

A full understanding of the amount of labor market discrimination on the basis of sex and the processes by which it is generated is an important ingredient of an effective policy that has as its goal the establishment of parity between men and women in the labor market. To this end, social scientists have invested an enormous amount of their energies and resources to discover the extent and nature of sexual inequalities in economic rewards and in labor market positions. This research has been concentrated in three major areas: wage differentials, occupational segregation by sex, and occupational status differentials. While research in two of these areas, wage differentials and occupational segregation by sex, have illustrated sexual inequalities and pointed to ways to remedy them, research in the area of sex differences in occupational status attainment has led to the somewhat paradoxical findings that men and women essentially have parity in labor market positions. This produces ambiguities as to the mechanism by which sexual equality in labor market positions could be obtained. This paper attempts to discuss and empirically assess why the status attainment literature produces seemingly paradoxical findings about sexual inequalities in labor market positions.

In this paper, we briefly discuss these three research traditions. We then posit and test one explanation for the counterintuitive findings of the status attainment literature. In the conclusions, we assess the importance of this one explanation, and then posit alternative explanations for the lack of congruence between status attainment and other areas of research on sexual discrimination.

The first body of research has studied sexual differentials in wages (earnings) and the process by which they are generated. This research has been carried out in large part by human capital economists (Fuchs, 1971; Cohen, 1971; Mincer and Polachek, 1974; Johnson and Stafford, 1974; Malkiel and Malkiel, 1973; Sawhill, 1973) and to a lesser extent by sociologists (Suter and Miller, 1973; Treiman and Terrell, 1975; Featherman and Hauser, 1976; Talbert and Bose, 1977; Halaby, 1977). The basic thrust of this research is to assess how differential levels of resources and the returns to those resources explain the wage differences between men and women. Education, work experience, and on-the-job training are the major human capital variables in these analyses. The results of this research suggest that there is a large wage difference between men and women that can only partially be explained by differential resources (most important, work experience). Some amount of the unexplained component of the earnings gap is clearly a result of discrimination against women in the labor market. A related research strategy is to control for the types of jobs men and women have. This enables one to understand the extent to which wage differences by sex are the result of unequal pay for equal work and/or the differential distribution of men and women across jobs. There is some evidence to suggest that women are concentrated in occupations that pay poorly (Lloyd, 1975; Snyder and Hudis, 1976). The amount of the wage gap that is explained by the differential allocation of men and women into positions in the labor market is substantial; the actual amount of the wage gap that can be explained by the differential distribution of men and women across jobs varies from study to study, as it is a function of the particular aspect of the job that is held constant.

The positions men and women hold in the labor market have been a major interest of those who study sexual discrimination. This is true not only because the types of jobs held affect wages, but also because it allows one to assess whether men and women have sexual equality in labor market position. There are two styles of research in this area: occupational segregation by sex and occupational attainment.

A number of researchers have examined occupational segregation in the labor force and have concluded that a large proportion of working women are in a small number of predominantly female occupations, such as nurses, secretaries, social workers, clericals, schoolteachers, and certain kinds of service occupations, that is, private household workers (Oppenheimer, 1970). Furthermore, there are large differences in the distribution of men and women across major occupation groups. From the results of this descriptive research, one can conclude that men and women are differentially distributed into labor market positions.

The problem with this descriptive research is that it is not obvious how this inequality arises. In order to attempt to detail the allocative process, sociologists developed a continuous scale that measures the occupational status of a position in the labor force. This index (Duncan, 1961) purportedly measures the "goodness of occupations," obtained by asking individuals to rate occupations as to their general social standing. The metric is assumed to be an interval scale and ranges from 0 to 96, but lacks a meaningful zero point. This metric (socioeconomic index) has been used in studies ascertaining how people get allocated into occupations and in studies of racial and sexual differences in occupational attainment. Almost all of these studies have produced results that conformed to theoretical expectations. However, the research comparing the occupational attainments of men and women produced some anomalous, unexpected results (Treiman and Terrell, 1975; McClendon, 1976; Featherman and Hauser, 1976). First, the occupational status distributions of men and women had similar mean levels and standard deviations. This implies that men and women have comparable levels and ranges of opportunities in labor market positions. Furthermore, regressions of occupational status on education and several aspects of family background have indicated that the occupational attainment process is essentially identical for men and women, suggesting that there is no discrimination in attainment of jobs. We argue that these findings are paradoxical, as they are in conflict with what is known about occupational segregation by sex, wage differentials, and the common-sense notion that women are discriminated against in their labor market activity. Although two more recent studies (Wolf and Fligstein, 1977; Sewell, Hauser, and Wolf, 1977) have found some differences in the levels and process of occupational status attainment by sex, the basic paradox has not been resolved.

An often suggested explanation for the counter-intuitive findings is that the samples of women for these analyses are restricted to employed women (Featherman and Hauser, 1976; Wolf, 1975; McClendon, 1976). That is, women who cannot find a job commensurate with their education and who can afford not to work will opt to remain out of the labor force. If this were the case, the sample of employed women could include an overrepresentation of those who have found jobs that are commensurate with their training and background and, therefore, the sex comparisons would be biased. In other words, the sex comparisons in occupational status attainment using employed men and women could be comparing all men and successful women, rather than all men and all women.

If one is interested in obtaining population parameters describing the process of occupational attainment for all women, restricting the sample to employed women could result in a bias in the structural parameters. If potential occupational status affects a woman's decision to work, as we have argued, the sample of employed women is a nonrandom sample of the population of all women. This can be viewed as a censoring problem (Heckman, 1974; 1976). We shall review and reject some alternatives that could correct for this problem, present a technique for obtaining the structural parameters for the whole population by accounting for the censoring problem, and ascertain whether the censoring problem is an adequate explanation for sex similarities in occupational status attainment.

One way to deal with the censoring problem is to include women who are not employed in an analysis predicting occupational status. There are three alternatives for doing this: (1) assign them their husband's score; (2) assign them a score for the role of housewife (Bose, 1973); or (3) assign them a zero on an occupational status scale. Assigning women who are not employed a housewife status score or their husbands' status score is inappropriate because it confuses the concept of status obtained through the woman's own labor market activities with status obtained by other means. Allowing over half the women in the sample to have status scores that do not relate to their own labor market activity is not only arbitrary, but the interpretation of any regressions based on such assignment is at best dubious. Applying a score of zero to women not employed at the relevant times poses difficulties for at least two reasons. Occupational status scales (in this case Duncan's--1961--Socioeconomic Index) are thought to be interval scales, but the meaningfulness of the zero point is questionable. Such an expedient assignment would be arbitrary, if not meaningless. Second, if women who are employed were assigned a score that ranges from 0 to 96 and those not employed were scored zero, other variables in the regression equation would be highly related to the dependent variable merely because they have a strong effect on whether the woman is working; thus, labor force participation and occupational attainment would be confounded. In summation, it seems difficult to include women who are not gainfully employed in equations predicting occupational status, particularly if one's interest is women's occupational attainments through their own activities in the labor market.

In attempting to take account of all women regardless of their current employment status, one could assert that there is a structural equation that describes the process of occupational attainment for all women. If a woman were to enter the labor force tomorrow, there is a set of structural parameters that describes the returns she would receive for her education and the effects of her other characteristics. The problem in estimating this structural equation is that we cannot observe the occupational statuses of women who are not currently employed. Estimating the structural equation solely for employed women potentially biases the structural parameters because of the censoring problem. By reformulating a technique originally suggested by Heckman (1974; 1975, 1976), we are able to estimate the structural parameters for all women and test whether the censoring problem is an adequate explanation for the apparent sex similarities in occupational attainment.

TESTING FOR THE EFFECTS OF CENSORING

In order to test for the effects of censoring, it is necessary to compare two equations: one that represents the process for employed women, and one for all women regardless of employment status. To achieve this, we use a technique derived from Heckman (1974, 1975, 1976).

Heckman (1974) produced a set of equations that related a woman's decision to work, how many hours she works, her wage rate, and her asking wage rate. One of the problems he encountered in estimating the structural equations describing the relationships between these concepts is that values on the dependent variables could not be observed for a subset of women--that is, nonworking women. The basic insight in Heckman's work is that estimating an equation for the subsample of working women can potentially bias the structural parameters because the expectations of the error terms in the equations for observed hours and wages are nonzero and are correlated with the exogenous variables. Heckman's technique takes account of the censoring problem, and thus he is able to estimate the structural parameters in his equations for all women.

Heckman's technique seems appropriate for our substantive problem. First, we are not able to observe occupational statuses for women who are not employed. Second, we believe that unmeasured factors that affect a woman's decision to work also will affect the occupational status of the job she will hold if she is working.

In order to apply Heckman's technique (1976) to our substantive problem, we need to reformulate his model in a manner that is more tailored to our concern with occupational status. The mathematical presentation of this formulation appears in the Appendix at the end of this paper.

Using the technique implies two equations: one that estimates whether a woman is employed, and the structural equation predicting her occupational attainment. The equation for whether a woman is employed is a probit equation that estimates the probability of selection into the subsample. From the parameters in this equation, we can construct a variable, $\hat{\lambda}_i$, which when added to the equation predicting occupational attainment on the basis of the subsample of working women will yield structural parameters for an occupational attainment equation for all women, regardless of employment status. This technique is dependent on the assumption that the error in the occupational status equation estimated solely for working women is conditional on the fact that a woman is working.

To summarize, the structural parameters describing the occupational attainment processes for all women are obtained from an equation estimated for working women that includes $\hat{\lambda}_i$ as a regressor. The test of our hypothesis that the sample of employed women includes an overrepresentation of successful women (those who can capitalize on their education and background) is to compare the occupational attainment equation for employed women with the structural equation for all women. If the censoring problem is to be an adequate explanation for the sex similarities in past research on occupational status attainment, then, we would expect the $\hat{\lambda}_i$ coefficient to be statistically significant and the returns to education and work experience to be smaller in the structural equation than in the equation estimated for employed women.

EQUATIONS TO BE ESTIMATED

At this point the equations that are estimated are presented. Equation (1) is the model that is estimated through a probit analysis of the total sample. Equation (2) is the equation with occupational status in 1967 as the dependent variable, corrected for the censoring problem. It is estimated for the sample of employed women using ordinary least squares. We also estimate an equation similar to equation (2) but without $\hat{\lambda}_i$. This is the kind of equation researchers usually estimate when interested in sex comparisons of occupational status attainment.

$$p(EMP_i) = F(\gamma_0 + \gamma_1 AGE_i + \gamma_2 KIDLT6_i + \gamma_3 KLD613_i + \gamma_4 KID1417_i + \gamma_5 ED_i + \gamma_6 AAM_i + \gamma_7 EVERTR_i + \gamma_8 OTFAMI_i + \gamma_9 EXPER_i + \gamma_{10} SES_i + \gamma_{11} FAM_i) \qquad (1)$$

$$SEI_i = \delta_0 + \delta_1 AGE_i + \delta_2 KIDLT6_i + \delta_3 ED_i + \delta_4 EVERTR_i + \delta_5 OTFAMI_i + \delta_6 EXPER_i + \delta_7 SES_i + \delta_8 FAM_i + \delta_{12} \hat{\lambda}_i + V_{2i} \qquad (2)$$

$p(EMP_i)$ is the probability that the i^{th} woman was employed at the time of the interview; AGE_i is the age of the woman in years; $KIDLT6_i$ is the number of children living in the household in 1967 who were under six years of age; $KID613_i$ is the number of children in the household in 1967 aged 6-13; $KID1417_i$ is the number of children living in the household aged 14-17; ED_i is the woman's number of years of formal schooling completed; AAM_i is the age of the respondent at first marriage; $EVERTR_i$ is a dummy variable that assumes a value of one if the woman has ever received training other than formal schooling; $OTFAMI_i$ is the total family income minus the wife's earnings if she was employed; $EXPER_i$ is the proportion of years between last attending school full time and the time of interview that a woman was employed at least six months; SES_i is a linearly combined factor score of father's (head of household's) occupational status, father's (head of household's) education, and mother's education; FAM_i is a factor score for farm origin and number of siblings; SEI_i is the Duncan (1961) socioeconomic index score of the occupation that the woman held at the time of interview;

γ_0 and δ_0 are intercepts; $\gamma_{1...}\gamma_{11}$ are the parameter estimates from the probit analysis; $\delta_{1...}\delta_8$ are estimates of the structural parameters from the ordinary least squares, σ_{12} is the covariance of the errors across equations, and λ_i is the inverse of the Mill's ratio.

We briefly discuss the equation with employment as the dependent variable, since it is not of major concern here and is only important in that it provides estimates of $\hat{\phi}_i$ from which $\hat{\lambda}_i$'s are obtained. EXPER, ED, and EVERTR are expected to have substantial positive effects, while KIDLT6, OTFAMI, and AAM are expected to negatively affect employment (Sweet, 1973; Mott, 1972; Bowen and Finegan, 1969; Cain, 1966; Waite, 1976). It should be noted that neither the woman's potential wage rate nor her potential occupational status is included explicitly in this equation despite the fact that both of these variables would be expected to positively affect employment. Instead, potential wage rate and potential occupational status are implicitly included by entering into the equation the determinants of these variables. For example, schooling, experience, and training are included as proxies for potential wage.

The major concern is the parameter estimates from the equation with SEI as the dependent variable. Included in this equation are (1) variables that have been shown to have effects on occupational attainment, that is, education, family of origin characteristics, and labor force participation (Wang, 1973; Wolf, 1975; Featherman and Hauser, 1976; Treiman and Terrell, 1975); (2) variables that had been expected by several researchers to affect a woman's occupational attainment, but whose effects have not been borne out empirically, that is, KIDLT6 and AGE (Wolf, 1975; Sheehy, 1975; McClendon, 1976); and (3) other family income. This second group of variables, which represent career contingencies and other factors related to the family of procreation, is included because it is possible that the bias due to the censoring problem could be affecting the parameter estimates of these variables. Other family income is included because it implicitly allows us to inspect the selectivity bias hypothesis. It is possible that women whose families have high "other family incomes" are less likely to be employed. However, if they do choose to take a job, they can be selective in the types of jobs they take.

Data for this study are from the 1967 National Longitudinal Survey of Mature Women, aged 30 to 44 (Parnes et al., 1970), chosen because it is the only national data set with satisfactory labor force experience measures for women. The subpopulation used in this study is all white, currently married females who were 30 to 44 years old in 1967. One could argue that we are introducing another potential bias because our sample is restricted to currently married women. Research has shown, however, that the structural parameters for currently married working women do not differ from those for all women as long as data for all relevant variables are present, as is the case in this data set (Wolf, 1977). Of the 3,112 women in the subpopulation, 1,679 had data on 11 variables and, therefore, could be used in probit analysis. A total of 765 women who were employed and met the other criteria were included in the SEI regression. The missing data were a problem. Those responding to all items tended to have slightly higher levels of education, occupational status, and labor force participation. While the mean levels differ, their effects on the correlations and parameter estimates are minimal. 1/

EMPIRICAL RESULTS

Table 1 presents the results from the probit analysis. The number of children in the household under six years of age, other family income, and age at first marriage have negative net effects on the probability of employment, while extent of labor market experience, educational attainment, and the number of children living in the household who are 14 to 17 have positive net effects. These results are as expected and do not warrant further discussion.

1/ We constructed $\hat{\phi}$'s and $\hat{\lambda}$'s in two fashions: (1) assigned a missing value whenever a value was missing on any of the exogenous variables in the probit equation; and (2) substituted means for missing values on the exogenous variables. The parameter estimates in Equation (2) did not vary depending on (1) whether we deleted cases listwise or pairwise and/or (2) used the $\hat{\lambda}_i$'s constructed in the different fashions.

TABLE 1 -- Results of Probit Analysis (Equation 22) Where the Dependent Variable is Employment at the Time of Interview (N = 1679)

Variable	Maximum Likelihood Estimate of Coefficient	Standard Error	Ratio of MLE/STD Error
Constant	-.457	.425	-1.076
AGE	.005	.010	.551
KIDLT6	-.479	.053	-9.105
KID613	.009	.031	.293
KID1417	.256	.050	5.126
ED	.088	.018	4.816
AAM	-.078	.012	-6.578
EVERTR	-.075	.076	- .986
OTFAMI	-.000027	.000008	-3.321
EXPER	2.463	.141	17.412
SES	-.016	.043	- .385
FAM	-.004	.037	- .023

Where KIDLT6 = number of children in household under 6 years old; KID613 = number of children in household ages 6 to 13; KID1417 = number of children in household ages 14 to 17; EVERTR = dummy variable signifying whether the woman has experienced training other than formal schooling; EXPER = proportion of years since last school attendance in which the woman worked at least six months; AGE = age in years; ED = number of years of formal schooling completed; AAM = age at first marriage; FAM = factor score for farm origin and number of siblings; SES = factor score for socioeconomic status of family of origin; OTFAMI = other family income in 1966.

Table 2 presents the means and standard deviations of the variables in Equations (1) and (2), as well as the correlations between the variables in Equation (2) and $\hat{\lambda}_i$. It should be noted that if a variable is positively related to employment, it is negatively related to λ_i.

Table 3 presents the results from two sets of ordinary least squares regressions. The first three columns are the results of the estimation of an equation that does not take into account the conditional distribution of the errors. This is the same type of equation that is usually estimated by researchers interested in female occupational attainment. The next three columns present the estimates of Equation (2) without presenting the coefficient for $\hat{\lambda}_i$. These coefficients represent the structural parameters of the process of occupational attainment of married women. This regression, by the adding of $\hat{\lambda}_i$ as an additional regressor, eliminates the potential bias in the original equation due to the fact that its error is conditional on the woman's being employed.

The effect of $\hat{\lambda}_i$ was not statistically significant. Furthermore, the effect of education does not differ in the corrected equation from the original equation solely estimated on working women. Our hypothesis that working women are an overrepresentation of successful women is not confirmed.

However, there are some minor differences, as the inclusion of $\hat{\lambda}_i$ alters some of the coefficients and standard errors. This is so because it is correlated with the exogenous variables in the occupational attainment equation. In the equation without $\hat{\lambda}_i$, EXPER has a positive, statistically significant effect. 2/ If a woman works at least six months or more in all

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2/ We use the .01 level as a criterion for statistical significance because of the effect of the nonrandom sampling design. By using the .01 level, we have, in effect, a .05 level of significance (Rosenfeld, 1976).

TABLE 2 -- Means and Standard Deviations for the Variables in Equations 22 and 23; Correlations Between $\hat{\lambda}$ and the Variables in the Occupational Attainment Equations (N = 765)

	Mean	S.D.	Correlations With $\hat{\lambda}$
SEI	40.103	20.485	-.143
KIDLT6	.324	.624	.249
KID613	1.212	1.176	
KID1417	.642	.783	
EVERTR	.352	.478	-.049
EXPER	.562	.293	-.759
AGE	37.498	4.260	-.030
ED	11.698	2.418	-.130
AAM	19.814	3.385	
FAM	.120	.968	-.014
SES	-.052	.968	.041
OTFAMI	8086.200	4394.554	.067
$\hat{\lambda}$	.609	.33[illegible]	1.000

Where SEI = occupational attainment in 1967; KIDLT6 = number of children in household under 6 years old; KID613 = number of children in household ages 6-13; KID1417 = number of children in household ages 14-17; EVERTR = dummy variables signifying whether the woman has experienced training other than formal schooling; EXPER = proportion of years since last school attendance in which the woman worked at least six months; AGE = age in years; ED = number of years of formal schooling completed; AAM = age at first marriage; FAM = factor score for farm origin and number of sibs; SES = factor score for socioeconomic status of family of origin; λ = inverse of the Mill's Ratio; OTFAMI = other family income in 1966.

TABLE 3 -- Parameter Estimates of Occupational Status Equations for the Subsample of Working Women (N = 765)

	Parameter Estimates Without λ			Structural Parameters Obtained from Equation 23		
	Regression Coefficient	Standard Error	Standardized Coefficient	Regression Coefficient	Standard Error	Standardized Coefficient
KIDLT6	- 1.503	1.013	-.046	- 1.680	1.129	-.051
EVERTR	3.636*	1.287	.085*	3.591*	1.293	.084*
EXPER	7.630*	2.070	.109*	8.618	3.452	.123
AGE	.082	.149	.017	.081	.149	.017
ED	4.078*	.295	.481*	4.098*	.300	.484*
FAM	-.132	.628	-.006	-.141	.629	-.007
SES	1.207	.729	.057	1.185	.732	.056
OTFAMI	.00070*	.00014	.150*	.00069*	.00014	.148*
Intercept	-21.304			-22.609		
R^2	.370			.370		

*Significant at .01 level. (See Footnote 3.)

Where KIDLT6 = number of children in household less than 6 years old, EVERTR = dummy variable signifying whether the woman has experienced training, other than formal schooling, EXPER = proportion of years since last school attendance in which the woman worked at least six months, AGE = age in years, ED = number of years of formal schooling completed, AAM = age at first marriage, FAM = factor score for farm origin and number of siblings, SES = factor score for socioeconomic status of family of origin, λ = inverse of Mill's ratio, OTFAMI = other family income.

years since leaving school full time, as opposed to not working at all, she would gain 7.63 SEI points according to the misspecified equation. In the equation with $\hat{\lambda}_i$, the unstandardized effect of EXPER, given that the woman has worked in all years, is a bit larger, 8.62 SEI points, and its standard error has increased from 2.07 to 3.45. The effect of EXPER is no longer statistically significant. 3/ Although the size of the parameter estimate for work experience in the corrected equation is large, so is its standard error. Although past work experience has the most powerful net effect on whether a woman is currently employed, the effect of work experience on occupational attainment is minimal, in that it is highly variable across individuals. This result is not in conflict with earlier research that suggests that labor force interruptions have minimal effects on women's occupational attainments (Wolf, 1975; Rosenfeld, 1976), despite their documented effects on women's earnings.

Except for the difference in the effects of experience, the coefficients of the other variables are remarkably similar in both equations, suggesting that the censoring problem has only minimal effects on the structural parameters.

After the correct specifying of the occupational attainment equation, there are three variables that have statistically significant and substantively important effects on a woman's occupational attainment: ED, EVERTR, and OTFAMI. The education effect is such that a one-year increase in educational attainment results in a 4.10 point increase in current occupational status. If a woman has had nonformal schooling, she experiences an increase of 3.59 points in current occupational status.

The OTFAMI effect is suggestive. It is statistically significant; a $10,000 increase in other family income results in a 6.9 point increase in current occupational attainment. Although this is not a large effect, since $10,000 is twice the standard deviation,

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3/ Heckman (1975) argues that the errors in the structural equations, after correcting for censoring, are heteroskedastic. This tends to increase the estimates of the standard error, and our criteria for significance are, thus, slightly conservative (Theil, 1971).

this is the second most powerful effect in the corrected occupational attainment equation. Other family income's positive effect in the equation without $\hat{\lambda}_i$, coupled with its negative effect in the probit analysis, suggested to us that women whose families have high other family income are less likely to be employed, but if they are employed, they are likely to have higher status jobs, net of all of the variables included in the model. This might be due to the fact that women who could afford not to return to employment, would wait to return to work until they found a job commensurate with their education. The fact that the other family income effect is stable after controlling for the censoring problem indicates that this explanation is unacceptable. Two alternative explanations seem possible. First, women whose families have high incomes probably have more and better contacts in the job market and thus are better able to find high status jobs. Second, the other family income effect could be due to assortative mating; that is, people of like statuses tend to intermarry. These data do not allow us to discriminate between the two.

CONCLUSION

This paper investigates one potential source of bias in estimating equations for women's occupational attainments. This bias is due to the exclusion of nonworking women from the occupational attainment equation. We present a technique that allows us to estimate the structural parameters for all currently married women, regardless of their employment status. The fact that the structural parameters obtained by including $\hat{\lambda}_i$ as a regressor are, in general, remarkably similar to the ordinary least squares estimates for working women suggests that the bias due to the censoring problem is minimal. The structural parameters, however, are superior to the ordinary least squares estimates without $\hat{\lambda}_i$ because the structural parameters better describe the process for the total population of currently married women.

Since the structural parameters for the occupational status equation for all women do not differ markedly from those for employed women, we conclude that sex comparisons of occupational attainment are not biased due to the censoring problem. In this context, we need not be concerned with the effect of the censoring problem on the male equation, since men are likely to be employed almost continuously throughout their lives. In populations where the probability of working is near 1 and therefore λ_i is near 0, the bias is minimal, since the conditional means of the errors are near zero (Heckman, 1975, p. 4).

Because the censoring problem appears to be minimal, selection into the sample of working women on the basis of the dependent variable is not a reasonable explanation for the apparent similarities between men and working women in the process of occupational attainment. Given that the censoring problem was the major speculation for the apparent sex similarities in occupational attainment and it was not found to be important empirically, we are left with two possible options concerning sexual inequality in labor market positions.

First, one could accept the finding of sexual equalities in labor market positions using the evidence from sex similarities in occupational status attainment. We are reluctant to accept this finding because the pervasive occupational segregation by sex contradicts the finding of sexual equality in labor market positions. Furthermore, acceptance of the finding would imply that no policy action should be undertaken to improve the position of women in the work force, as the research suggests they have already reached parity with men. Since this result is counter to the common-sense notion that women are discriminated against in terms of access to certain labor market positions, it seems necessary to pursue this issue further before making specific policy recommendations.

The second option is to challenge the use of occupational status as the best indicator of whether individuals (or groups of individuals) have comparable positions in the labor market. This is a reasonable alternative, since the results of research based on occupational status are so in conflict with what is known about occupational segregation and earnings differentials by sex. Occupational status (or prestige) measures the "goodness" of the occupation as evaluated by groups of raters (Duncan, 1961; Siegel, 1971; Featherman, Jones, and Hauser, 1975). The issue becomes, what is the meaning of a measure of "goodness" of occupation and how appropriate is such a measure for identifying whether individuals have comparable positions in the labor market. The work of Goldthorpe and Hope (1972) suggests that three criteria are used by the raters in evaluating the goodness of an occupation: income, education, and prestige of the job. While these criteria seem important in terms of evaluating the social "goodness" of occupations, they may not provide us with an adequate measure of comparable positions in the labor market. In short, we argue that the measure poorly discriminates between occupations and by definition is unable to differentiate between jobs in the same occupation. Its inability to adequately distinguish between two related but very different occupations can be seen by the fact that the detailed occupation "elementary school teachers," has a status score of 71.2, while the title "school administrators, elementary and secondary," has a score of 71.7. Thus, two occupations with divergent amounts of control in the workplace, career ladders, and income, have essentially identical occupational statuses.

A further difficulty in the ability of this measure to correctly distinguish between occupations is caused by the very substantial white collar/blue collar dimension to the scale. The correlation between occupational status and a dummy variable for whether the individual's occupation is white collar or blue collar is .83 for men and .81 for women in an analysis of data obtained from Wisconsin high school seniors in 1957 who were interviewed at mid-life, when they were 35, on the average. In the same data set, one can choose a point in the status distribution and call the top half white collar and the bottom half blue collar and one is able to correctly classify 93 percent of the individuals. The scale, therefore, ranks lower white collar (female sex-typed) jobs much higher (about 20 points) than upper blue collar jobs--craftsmen or operatives--despite the fact that these latter jobs are much more economically rewarding. In essence, we are arguing that important distributions *between* occupations are not being tapped or are being incorrectly tapped by this metric.

Furthermore, the occupational status scale does not differentiate between jobs within the same occupational title. For example, the scale does not discriminate between an accountant who fills out income tax forms for H & R Block and an accountant who is in charge of inventories in a large corporation, despite potentially enormous differences in salary, rank, responsibility, and status. Therefore, the occupational status scale is not a good metric to use when one is trying to determine if individuals have comparable positions in the world of work.

The critical issue, then, becomes how to measure comparable positions. To do this, one must first attempt to consider a number of different dimensions that differentiate jobs. Some of these dimensions might be authority position, closeness of supervision of work, and the possibilities of moving up a career ladder. Recently Wolf and Fligstein (1977) have demonstrated that men have more authority than women net of education and status. This confirms our notion that in order to understand sexual inequality in labor market positions, one must consider a number of dimensions upon which jobs are differentiated besides status.

Until other dimensions of labor market position are explicitly considered in studies of sexual inequality in labor market positions, we will not be able to understand how the jobs men and women have in the work setting differ. We are reluctant to make policy recommendations on these paradoxical findings that suggest that men and women have already reached parity in terms of types of jobs held. A further understanding of the differences in job positions rests on our being able to specify the relevant dimensions of such differences, as well as the processes by which they are generated.

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APPENDIX

We are interested in two equations: one that estimates whether a woman is in the sample (that is, whether the woman is employed), and the structural equation predicting her occupational attainment. To expedite the following argument, the presentation of the exogenous variables in each equation is omitted.

$$p(EMP_i) = F(X_i'\underline{\gamma}) \qquad (1)$$

$$SEI_i = Y_i'\underline{\delta} + \varepsilon_{2i} \qquad (2)$$

where $p(EMP_i)$ is the probability that the i^{th} woman works, $X_i'\underline{\gamma}$ is a set of explanatory variables and parameters from a probit analysis, SEI_i is occupational status (Duncan, 1961), $Y_i'\underline{\delta}$ is a set of explanatory variables and parameters in the structural equation, and ε_{2i} is an error term in that equation.

Considering Equation 1:

$$\hat{\phi}_i = I(X)_i = X_i'\hat{\underline{\gamma}} \qquad (3)$$

where $I(X)_i$ is the predicted probability that the i^{th} woman will work obtained from a probit analysis. We assert that there exists (see Crawford, 1975a; 1975b):

$$\varepsilon_{1i} = I_i^* \sim N(0,1) \qquad (4)$$

where ε_{1i} is the threshold level of work for the i^{th} woman. It is a function of unmeasured variables such as tastes for work, ability, and labor market factors.

It follows (see Crawford, 1975a; 1975b) that:

EMP = 1 (i.e., the woman is employed) if (5)

$I(X)_i \geq I_i^* \text{ or } \phi_i \geq \varepsilon_{1i}$

EMP = 0 (i.e., the woman is not employed) if (6)

$I(X)_i < I_i^* \text{ or } \phi_i < \varepsilon_{1i}$

$$\Pr(EMP_i = 1 | X) = F(\phi_i) \qquad (7)$$

where $F(\cdot)$ is the cumulative standard normal density function evaluated at ϕ_i.

Now given that ε_{1i} is the stochastic element in the decision to work and ε_{2i} is the disturbance in Equation (2), it is reasonable to assert:

$$\begin{pmatrix} \varepsilon_{1i} \\ \varepsilon_{2i} \end{pmatrix} \sim N \left(\begin{pmatrix} 0 \\ 0 \end{pmatrix} \quad \begin{pmatrix} 1 & \sigma_{12} \\ \sigma_{12} & \sigma_{22} \end{pmatrix} \right)$$

Standardizing ε_{2i}, this becomes

$$\begin{pmatrix} \varepsilon_{1i} \\ \varepsilon_{2i}/\sqrt{\sigma_{22}} \end{pmatrix} \sim N \left(\begin{pmatrix} 0 \\ 0 \end{pmatrix} \quad \begin{pmatrix} 1 & \sigma_{12}/\sqrt{\sigma_{22}} \\ \sigma_{12}/\sqrt{\sigma_{22}} & 1 \end{pmatrix} \right)$$

We are interested in deriving the conditional expectation of ϵ_{2i}, given that the woman works ($\phi_i \geq \epsilon_{1i}$).

From Johnson and Kotz (1970: 82-83), it is known that if $X \sim N(\mu, \sigma^2)$ then:

$$E(X|\phi_i > X) = \mu - \sigma^2\lambda_i. \tag{8}$$

Thus,

$$E(\epsilon_{1i}|\phi_i > \epsilon_{1i}) = -\lambda_i = \frac{f(\phi_i)}{F(\phi_i)} \quad \underline{4}/ \tag{9}$$

since $\mu = 0$ and $\sigma = 1$. λ_i is the inverse of the Mill's ratio.

4/ Whereas Heckman is concerned with truncation from below (i.e., $E(X \mid X > \phi)$, which equals $\mu + \sigma^2\lambda$), we are concerned with truncation from above (i.e., $E(X \mid \phi > X)$, which equals $\mu - \sigma^2\lambda$) (Crawford, 1975b). Lambda, in Heckman, is equal to $\frac{f(-\phi)}{1-F(-\phi)}$; our lambda equals $\frac{f(\phi)}{F(\phi)}$. These are equivalent.

The conditional expectation of ε_{2i} given that a woman is employed can be derived as follows (Johnson and Kotz, 1972: 113):

$$E(\varepsilon_{2i}/\sqrt{\sigma_{22}} \mid \phi_i > \varepsilon_{1i}) = \rho\, E(\varepsilon_{1i} \mid \phi_i > \varepsilon_{1i}) = -\rho\,\lambda_i \text{ where } \rho = \frac{\sigma_{12}}{\sqrt{\sigma_{22}}}. \tag{10}$$

Unstandardizing, we get:

$$E(\varepsilon_{2i} \mid \phi_i > \varepsilon_{1i}) = -\rho\sqrt{\sigma_{22}}\;\lambda_i = -\sigma_{12}\lambda_i. \tag{11}$$

When the error term in the SEI equation is treated as conditional on employment, it has a nonzero expectation and is correlated with the exogenous variables in that equation. Since some of the exogenous variables are the same in Equations (1) and (2), the correlation is due to the fact that λ_i is a function of ϕ_i, which is a linear combination of the exogenous variables in the equation predicting employment. The quantity λ_i is the inverse of the Mill's ratio--the ratio of the ordinate of a standard normal to the right tail (Heckman, 1975: 3). Its denominator is the probability that a woman works. As $\phi_i \rightarrow +\infty$, $\lambda_i \rightarrow 0$. In populations where the probability of working is near 1 and therefore λ_i is near 0, the bias is minimal, since the conditional means of the errors are near zero (Heckman, 1975: 4; 1976).

Equation (12) is the expectation function predicting occupational status conditional on the woman working:

$$E(SEI \mid \phi_i > \varepsilon_{1i}) = Y_i'\underline{\delta} + -\lambda_i\sigma_{12} \tag{12}$$

$$\begin{aligned} SEI_i &= E(SEI \mid \phi_i > \varepsilon_{1i}) + V_{2i} \text{ where} \\ V_{2i} &= \sigma_{12}\lambda_i + \varepsilon_{2i} \text{ and } E(V_{2_i}) = 0 \end{aligned} \tag{13}$$

Equation (13) is the equation we estimate solely for working women that allows us to obtain the structural parameters for all women. Since $V_{2i} = \sigma_{12}\lambda_i + \varepsilon_{2i}$, Equation (13) is merely another way of rewriting Equation (2). Substituting from Equations (12) and (13):

$$\begin{aligned} SEI_i &= Y_i'\underline{\delta} - \sigma_{12}\lambda_i + \sigma_{12}\lambda_i + \varepsilon_{2i} = \\ &Y_i'\underline{\delta} + \varepsilon_{2i} \end{aligned} \tag{14}$$

By including λ_i as a regressor, we have derived an equation to be estimated for employed women that controls for the potential bias due to the censoring problem. The structural parameters for Equation (2) are obtained from Equation (13), which includes λ_i. The coefficients in Equation (13) are the structural parameters; one does not treat the coefficient of λ_i as one of the structural parameters. The parameter estimated for λ_i in Equation (13) is an estimator of σ_{12}: the covariance between the errors in the equation predicting employment and the errors in the equation predicting occupational status.

Equation (13) is estimated in a fashion suggested by Heckman (1975, 1976). Equation (1) is estimated with a probit analysis, thus obtaining ϕ_i's for all persons in the sample. Then $\hat{\lambda}_i$'s are obtained for all employed women in the sample by using ϕ_i and generating the inverse of the Mill's ratio for each individual. Finally, using ordinary least squares, Equation (13) is estimated, which includes $\hat{\lambda}_i$ as an additional regressor.

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THE IMPACT OF THE UNEMPLOYMENT RATE ON LABOR FORCE ENTRIES AND EXITS

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BACKGROUND

Economists view the response of labor supply to the unemployment rate as being the net result of two opposing effects. The additional worker effect predicts that during times of high unemployment if the primary earner becomes unemployed, other family members may enter or postpone exit from the labor force in order to maintain family income. Such individuals may leave the labor force when economic conditions improve and the primary earner is again employed on a regular basis. Alternatively, the discouraged worker effect holds that during times of high unemployment when individuals become unemployed, they may become discouraged and drop out of the labor force after a fruitless period of job search. Others may postpone labor force entry until economic conditions improve. Theoretically both these effects may operate simultaneously on labor force entries and exits to produce a net effect on labor force participation. The direction of this net effect must be determined empirically, although the cyclical sensitivity of labor supply behavior is expected to be greater for groups that have traditionally had a weaker attachment to the labor force, such as married women and teenagers.

The empirical evidence on the direction and magnitude of the discouraged or additional worker effect is mixed. Recent time series studies suggest that in most cases the discouraged worker effect predominates, but that the negative effect of the unemployment rate on labor force participation is not very large (Wachter, 1972; Barth, 1968). 1/ Using

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1/ Wachter found some evidence of a predominance of the additional worker effect among older women. For an excellent review of the earlier literature on this subject see Mincer (1966).

gross flow data from the current population survey, Smith (1974) presents evidence suggesting that the observed cyclical sensitivity of the labor force is due to the increase in the number of unemployed workers during a recession coupled with the strong likelihood of workers' leaving the labor force when unemployed. According to Smith, postponement of labor force entry during times of high unemployment does not play an important role. Such time series studies suffer from a lack of detailed data on the personal characteristics of workers. This means that the time series results do not unambiguously measure the impact of changes in the unemployment rate on the labor supply decisions of otherwise identical individuals, since the estimated relationship is affected by compositional factors as well.

Cross-sectional studies may be regarded as measuring the long-run impact of unemployment on participation rates. Such studies generally indicate that the impact of the local labor market unemployment rate on the area labor force participation rate is negative, significant, and larger than the results obtained for time series studies (Bowen and Finegan, 1969). Such findings, however, have been questioned by Fleisher and Rhodes (1976; undated) because of the aggregation problems entailed in the use of average data for the local labor market. 2/ After correcting for these problems, Fleisher and Rhodes (1976) find no evidence that the unemployment rate has a significant negative effect on the labor force participation rate.

This paper uses data from the National Longitudinal Surveys of Mature Women to reexamine the impact of the unemployment rate on labor force participation. The women in the sample were aged 34 to 48 in 1971, the initial year of this analysis. 3/ In this study, the sample is restricted to women who were married in 1971 because of their greater likelihood of exhibiting

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2/ According to Fleisher and Rhodes (1976, p. 398), "the principal source of bias in cross-section studies is failure to recognize that unemployment rates in local labor markets are determined simultaneously with labor force participation rates." Thus, OLS estimates using cross-sectional data are biased upward (in absolute value).

3/ See Parnes et al. (1976), for a fuller description of the data.

cyclically sensitive labor supply behavior. The analysis is conducted separately for black and white women to identify any important differences between the two groups. A cross-sectional approach is used in which the impact of the labor market unemployment rate is ascertained while the effects of other variables that influence labor supply behavior are held constant. Since data on individuals are used, aggregation problems are not an issue. The net effect of the level of unemployment is investigated by introducing the local labor market unemployment rate into regression equations estimating the probability that a woman will enter the labor force by the 1972 survey week (given that she is out of the labor force at the time of 1971 survey), and the probability that a woman will exit the labor force by the 1972 survey week (given that she is in the labor force at the time of the 1971 survey). In this way it is possible to examine the impact of the unemployment rate on entries and exits separately in order to better understand how any observed effect on labor force participation is generated. If the discouraged worker effect predominates, an increase in the unemployment rate would, other things equal, work to decrease the probability of entering the labor force and/or to increase the probability of exiting from the labor force. If the additional worker effect is dominant, a rise in the unemployment rate would, all else equal, be associated with an increase in the probability of entering the labor force and/or a decrease in the probability of exiting from the labor force.

THE MODEL

The labor force participation decision of a married woman may be conceptualized as one in which a woman and her family determine the allocation of each member's time among three alternatives: work in the market, work in the home, and leisure. 4/ This decision process involves comparing the relative advantages of a wife's market and nonmarket work at each point in time. A wife participates in the labor force at time t if the value of her time in the

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4/ See Becker (1965), Mincer (1962), Heckman (1974), and Heckman and Willis (1977).

market, w_t, exceeds the value of her time in the home, w_t*. 5/ She does not participate if w_t is less than w_t*.

A woman may change her labor force status between time t and t+1 if the value of her market and/or home time changes. The effect of a given change in the value of market or home time depends, however, on the initial situation, that is, the relative magnitudes of w_t and w_t*. For example, suppose over the course of a year, one of a woman's children reaches school age. This is expected to reduce the value of her home time. If she was previously out of the labor force, will she now enter? Not necessarily. If the value of her home time initially greatly exceeded the value of her market time, then it is possible that she will remain out of the labor force. On the other hand, were the gap between w_t and w_t* smaller, she might enter. Thus, the probability of labor force exit or entry depends on both the initial values of home and market time and on the changes in those values that have occurred over the period. 6/

While the notions of the value of market time and home time are useful theoretical concepts, it is generally not possible to directly observe or measure w_t and w_t*. This is obviously the case with respect to the value of home time. The value of market time, in

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5/ w_t* is the shadow price of time in the home when zero work hours are supplied to the market (Gronau, 1973). It is important to note that sex discrimination may influence the labor supply decisions of women by lowering w_t (e.g., through labor market discrimination) and/or raising w_t* (e.g., through differential training in the relevant skills on the basis of sex). Household decision-making models, such as the one employed here, have been criticized by Ferber and Birnbaum (1977) for their assumption of rationality and underemphasis of the role of tradition in determining the division of tasks within the family.

6/ In an analysis of changes in the supply of work hours, Kalachek, Larson, and Raines (1977) take into account the question of the speed with which labor supply adjustments are made, an issue not explicitly considered in the empirical work presented here.

the form of the market wage rate, can be observed for women who are currently employed. Even in this case, however, it is not clear that the observed wage rate fully represents all aspects of the value of market time. The value of a woman's time spent in the market depends on the nonpecuniary as well as the pecuniary aspects of her work. It depends not simply on the current wage, but on the prospects for wage growth in the future and the wage penalty associated with labor force withdrawal in her type of work (Polacheck, 1977). In addition, if she becomes unemployed, the alternative opportunities open to her must also be considered, 7/ and market conditions must be taken into account.

Thus it may be both necessary and desirable to represent both w_t and w_t* by the set of variables that determine them, rather than by their actual values. The specific variables used in this study are shown in Table 1. The variables listed under "market advantages" serve as proxies for the value of market time in the initial period and the market conditions prevailing during the period. The education, pre-1971 experience and health variables represent human capital factors influencing wage rates. 8/ The job characteristics included for women who were in the labor force in 1971 are designed to represent such factors as the nonpecuniary aspects of the work, opportunities for wage growth through employment, and the wage penalties for discontinuous participation.

Market conditions are represented by the following three variables. The impact of the unemployment rate is of course of prime interest in this study. In order to assess the impact of the unemployment rate, however, it is important to control for other local conditions.

7/ That is, the whole wage distribution must be considered.

8/ Education increases home productivity as well as market productivity, but most probably increases the latter more than the former (Liebowitz, 1974). The work of Heckman and Willis (1977) suggests that labor market experience may reflect differences among women with respect to omitted variables, in addition to actual state dependence. However, it is not clear that this omitted variable problem would bias the coefficient on the unemployment rate, the major concern of this study, in any particular direction.

TABLE 1. MEANS OF VARIABLES

	Labor Force 1971		Out of Labor Force 1971	
	Whites	Blacks	Whites	Blacks
Market Advantages (1971)				
Personal and Job Characteristics				
Education (years)	11.5701	10.4271	11.0984	9.2083
Pre 1971 experience (years)	10.8746	13.3611	5.6780	7.0923
Health limit (1=health limits kind or amount of work; 0=otherwise)	0.0939	0.0905	0.1557	0.3417
Union coverage (1=wages set by collective bargaining; 0=otherwise)	0.1959	0.1709	(a)	(a)
Mgrl., prof., tech. (1=managerial professional or technical worker; 0=otherwise)	0.1799	0.1256	(a)	(a)
Service Worker (1=service worker; 0=otherwise)	0.1369	0.4623	(a)	(a)
Market Conditions				
1971 unemployment rate (annual average)	6.3057	6.3859	6.4477	6.7875
Female demand index	31.1385	32.6281	30.4574	31.1333
South (1=south; 0=otherwise)	0.2611	0.7286	0.2934	0.5750
Nonmarket Advantages (1971)				
Education of husband (years)	11.3917	8.7889	11.4803	8.1333
Health limit of husband (1=health limits kind or amount of work; 0=otherwise)	0.1354	0.1357	0.1230	0.1750

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a. Not applicable

Table 1. MEANS OF VARIABLES (continued)

	Labor Force 1971		Out of Labor Force 1971	
	Whites	Blacks	Whites	Blacks
Nonmarket Advantages (continued)				
Children under 6 (number)	0.1178	0.2161	0.3197	0.6167
Children over 6 (number)	2.0414	2.5829	2.4131	3.3333
Other family income ($1,000's)	9.0106	5.0146	11.1201	5.9965
Net assets ($1,000's)	20.3540	6.3831	22.2107	3.6428
Changes, 1971-72				
Health improvement 1971-72 (1=improvement; 0=otherwise)	0.0303	0.0201	0.0344	0.1083
Health deterioration 1971-72 (1=deterioration; 0=otherwise)	0.0589	0.1005	0.0721	0.0583
Change in marital status, 1971-72	0.0239	0.0503	0.0230	0.0333
Change in number of children under 6, 1971-72	-0.0318	-0.0754	-0.0607	-0.1083
Dependent Variables				
LN (1=out of the labor force, 1972; 0=otherwise)	0.0939	0.1055	(a)	(a)
NL (1=in the labor force, 1972; 0=otherwise)	(a)	(a)	0.1344	0.2000

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a. Not applicable

The female demand index summarizes how conducive the industry mix of a labor market is to female employment, given the tendency of women to be segregated by occupation (Bowen and Finegan, 1969). The regional dummy variable controls for any differences between the South and the rest of the country in real wages and the cost of living. The incentive to seek market work would be lower in the South than elsewhere to the extent that real wages for women of similar personal and job characteristics are lower, and to the extent that the real value of other family income and assets is higher.

The advantages of nonmarket work are given by variables representing the demand for a wife's services within the home. The long-term earnings prospects of the husband (as determined by his education and health), as well as the current income and asset position of the family, are controlled for. The presence of children, particularly those of preschool age, is expected to raise the productivity of home time relative to market time for the wife and, thus, to encourage the substitution of home work for market work. On the other hand, the larger the number of children, other things equal, the greater the family's demand for income that would increase the incentives for market work (that is, children have a positive substitution effect and a negative income effect on the demand for nonmarket work). Thus, the sign on the children variables is an empirical question, although the presence of young children has generally been found to deter labor force participation.

Finally, the effect of changes over the period in variables representing the value of market and home time is examined. Changes in some of the variables were not considered to be solely causes of changes in the wife's labor force behavior. For example, the magnitude of other family income or of assets might change as other family members respond to a change in the wife's behavior. The focus is upon changes in health, marital status, and number of children under six years of age as explanatory factors. 9/

EMPIRICAL RESULTS

As may be seen in Table 1, approximately 1 out of 10 married women who were in the labor force in 1971 had exited by 1972. Of the married women who were out of the labor force in the initial year, 13 percent of whites and 20 percent of blacks had entered by 1972. The regression results reported in the following two tables are designed to explain these changes in labor market status over the year, and particularly to identify the role played by the unemployment rate in influencing labor supply decisions. The probability of labor force entry is considered in Table 2; the probability of labor force exit, in Table 3. The tendency for considerably fewer variables to be significant in the two black female equations is probably due to the small sample size, which tends to exacerbate the problem of multicollinearity among the explanatory variables. The relatively low adjusted

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9/ In addition, changes in income and assets over the period may be due to economic conditions, and thus should be omitted, so that the full effect of economic conditions is captured by the unemployment rate variable. While it would have been appropriate to include change in husband's health status as an explanatory variable, this information was not available. It may be argued that changes in labor force status, marital status, and number of children between 1971 and 1972 are all determined simultaneously. The assumption made here is that changes in marital status and number of children are determined prior to the change in labor force behavior. This means that these variables will be uncorrelated with the error term, so that unbiased parameter estimates may be obtained with ordinary least squares. It should be noted that deleting these variables from the regression equations did not affect the findings for the unemployment rate variable, the major focus of this paper.

Table 2. REGRESSION RESULTS: THE PROBABILITY OF LABOR FORCE ENTRY

Dependent Variable: NL

Explanatory Variables	Whites	Blacks
Market Advantages (1971)		
Personal Characteristics		
Education	-0.00422 (0.00725)	-0.02201 (0.01593)
Pre 1971 experience	0.00505[c] (0.00277)	0.00056 (0.00564)
Health limit	-0.11456[a] (0.04364)	-0.15550 (0.10175)
Market Conditions		
1971 unemployment rate	-0.01829[a] (0.00690)	0.02862[c] (0.01530)
Female demand index	0.00297 (0.00269)	-0.00938 (0.01007)
South	-0.02774 (0.03369)	0.14294 (0.09613)
Nonmarket Advantages (1971)		
Education of husband	0.002757 (0.00549)	0.00914 (0.01375)
Health limit of husband	-0.00211 (0.04344)	0.05989 (0.10213)
Children under 6 (number)	-0.06758[b] (0.02623)	0.07728 (0.05234)
Children over 6 (number)	0.00746 (0.00873)	0.00149 (0.01710)
Other family income	0.00026 (0.00164)	-0.00726 (0.00840)
Net assets	-0.00081[b] (0.00041)	0.00713 (0.00693)

See footnotes at the end of table.

Table 2. REGRESSION RESULTS: THE PROBABILITY OF LABOR FORCE ENTRY (continued)

Explanatory Variables	Whites	Blacks
Changes, 1971-72		
Health improvement, 1971-72	0.13047 (0.08354)	0.05511 (0.14266)
Health deterioration, 1971-72	-0.09265[c] (0.05442)	-0.24724 (0.16541)
Change in marital status, 1971-72	0.27575[a] (0.09249)	-0.00386 (0.21598)
Change in number of children under 6, 1971-72	-0.09931[b] (0.04984)	0.09231 (0.08835)
Constant term	0.18850	0.37401
Adjusted R^2	0.037	0.0217
F-statistic	2.446	1.165
Number of observations	510	120

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[a] Significant at the 1 percent level on a two-tailed test.

[b] Significant at the 5 percent level on a two-tailed test.

[c] Significant at the 10 percent level on a two-tailed test.

Table 3. REGRESSION RESULTS: THE PROBABILITY OF LABOR FORCE EXIT

Dependent Variable: LN

Explanatory Variables	Whites	Blacks
Market Advantages (1971)		
Personal and Job Characteristics		
Education	0.004707	0.001358
	(0.00633)	(0.01010)
Pre 1971 experience	-0.00413[b]	-0.00452
	(0.00191)	(0.00291)
Health limit	0.15989[a]	0.20910[b]
	(0.04700)	(0.08337)
Union coverage	-0.04896[c]	-0.00304
	(0.02930)	(0,06016)
Mgrl., prof., tech.	-0.05106	0.06395
	(0.03251)	(0.08125)
Service worker	0.08473[b]	0.07949
	(0.03505)	(0.05516)
Market Conditions		
1971 unemployment rate	0.00629	-0.00381
	(0.00600)	(0.00980)
Female demand index	0.00181	-0.00001
	(0.00248)	(0.00580)
South	0.01534	-0.04826
	(0.02848)	(0.05516)
Nonmarket Advantages (1971)		
Education of husband	0.00312	0.00073
	(0.00445)	(0.00699)
Health limit of husband	-0.04550	-0.00866
	(0.03414)	(0.06430)
Children under 6 (number)	0.09181[b]	-0.02827
	(0.03737)	(0.04723)
Children over 6 (number)	-0.01065	-0.00544
	(0.00822)	(0.01181)

See footnotes at the end of table.

Table 3. RECRESSION RESULTS: THE PROBABILITY OF LABOR FORCE EXIT (continued)

Explanatory Variables	Whites	Blacks
Other family income	-0.0007 (0.00157)	-0.00446 (0.00441)
Net assets	-0.00037 (0.00053)	0.00003 (0.00024)
Changes, 1971-72		
Health improvement, 1971-72	-0.17639[b] (0.07958)	0.46307[a] (0.16799)
Health deterioration, 1971-72	0.16232[a] (0.04885)	0.24948[a] (0.07164)
Change in marital status, 1971-72	-0.11129 (0.07491)	-0.05020 (0.09554)
Change in number of children under 6, 1971-72	0.15179[b] (0.06609)	-0.14216 (0.09299)
Constant term	-0.03045	0.14309
Adjusted R^2	0.057	0.136
F-statistic	2.982	2.640
Number of observations	628	199

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[a] Significant at the 1 percent level on a two-tailed test.

[b] Significant at the 5 percent level on a two-tailed test.

[c] Significant at the 10 percent level on a two-tailed test.

R^2's for the regressions are characteristic of cross-sectional studies, particularly in the case of binary dependent variables. 10/

The most important findings are those for the unemployment rate variable. Among whites, the net effect of the unemployment rate on the probability of entering the labor force is found to be significantly negative. Other things equal, a 1 percentage point increase in the unemployment rate lowers the probability of entering the labor force by 1.8 percentage points. (This is 19.5 percent of the mean of the dependent variable.) The unemployment rate is found to have a small positive effect on the probability that a white woman will exit from the labor force, although this coefficient is not statistically significant. These findings are consistent with the predominance of the discouraged worker effect among whites, where high unemployment rates primarily work to discourage labor force entry.

Among blacks, the additional worker effect appears to dominate, 11/ although, as in the case of whites, the impact of the unemployment rate is stronger on entries than upon exits. Other things equal, a 1 percentage point increase in the unemployment rate raises the probability of entering the labor force by 2.9 percentage points. (This is 27.1 percent of the mean of the dependent variable.) A rise in the unemployment rate is associated with a small reduction in the probability of exiting from the labor force, but this effect is not statistically significant.

The predominance of the additional worker effect among black married women is most probably due to two factors. First is the higher incidence of unemployment among blacks than among whites. At any given aggregate unemployment rate, the husbands of black women are likely to experience more employment problems over the 1971-72 period, even after controlling for such factors as their education and health. Second is the lower mean income and asset levels of black families (Table 1). This greater need for income makes it likely that the

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10/ Considerations of time and expense precluded experimentation with the more appropriate logit or probit specifications.

11/ See Cain (1967) for a similar finding.

additional worker effect will dominate among this group. 12/ It is interesting to note that there is no evidence that black women labor force entrants had any easier time locating a job than did whites. On the contrary, 57.9 percent of the black entrants experienced some unemployment over the year period, as compared to 34.8 percent of whites.

The regression results shed light on a number of other factors influencing married women's decisions to enter or leave the labor force over a one year period. The extent of previous labor market experience appears to be an important factor working to reduce the probability of exiting the labor force and to increase the probability of labor force entry (although these coefficients are not significant for black women). 13/ Among white women, union coverage significantly reduces the probability of labor force exit, as does employment in a managerial, professional, or technical occupation. Also, among whites, service workers are more likely than other comparable women to leave the labor force (while not significant in the black regression, this coefficient is larger than its standard error).

For women in this age group, health status appears to be an important factor in labor supply decisions. Women whose health limits the kind or amount of work they can do are less likely to enter or remain in the labor force. A deterioration in health status over the period raises the probability of labor force exit and lowers the probability of labor force entry. An improvement in health status generally has the opposite effect. A puzzling exception in the case of black women who were in the labor force in 1971. For this group an improvement in health status is found to significantly increase the probability of labor force exit. A reporting error may be involved here, where women who have left the labor force are less aware of

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12/ The additional worker effect corresponds to the income effect, and the discouraged worker effect, to the substitution effect of a change in the unemployment rate.

13/ As discussed in footnote 8, these coefficients may overestimate the extent of true state dependence. Additional evidence of the simple relationship between previous experience and participation for this cohort is found in Blau (1976).

work-related health problems. (This coefficient is based on a sample of only four black women who reported that they had a health limitation in 1971, but did not report such a limitation in 1972.)

Interesting racial differences emerge with respect to the impact of young children and marital status on labor force turnover. Among white women the larger the number of children under 6, the less likely a woman is to enter or remain in the labor force. Increases in the number of young children over the period similarly work to reduce participation. Among black women, however, the presence of additional young children tends to encourage participation by reducing the probability of exit or increasing the probability of entry (again, while not significant these coefficients are larger than their standard errors). Thus, it appears that at the lower mean income levels of black families, the income effect of children dominates the substitution effect. A change in marital status over the period to widowed, divorced, or separated strongly increases the probability of labor force entry among whites, but no significant effect on entry is obtained for blacks. This may be due to the greater likelihood that black women will be eligible for welfare programs that reduce the incentive to participate in the labor force. 14/

The consequences of the estimated relationships between the unemployment rate and the probability of entering or exiting the labor force are shown in Table 4. At an unemployment rate of 4 percent, roughly corresponding to full employment, 55 percent of white women as compared to 61 percent of black women would participate in the labor force in 1972. At an 8 percent unemployment rate, corresponding to recession levels, only one half of the white group would be in the labor force as compared to 66 percent of blacks. The tendency of the unemployment rate to operate primarily on entry probabilities is indicated by figures on the percentage of the labor force comprised of entrants. Other things equal, as the unemployment rate increases, white women postpone entry into the labor market and entrants decline as a proportion of the labor force. Among blacks, a rise in the unemployment rate tends to accelerate labor force entry and entrants increase as a proportion of the labor force.

14/ Some preliminary evidence supporting this hypothesis has been found by Sylvia Moore (in progress, chap. 1).

Table 4. PREDICTED ENTRY, EXIT AND LABOR FORCE PARTICIPATION RATES, 1971-72

(percent)

	Unemployment Rate		
Whites	4%	6%	8%
Entry rate, 1971-72[a]	17.92	14.26	10.60
Exit rate, 1971-72[a]	7.94	9.20	10.46
Labor force participation rate, 1972[b]	55.19	52.73	50.28
Entrants/labor force, 1972[c]	16.15	13.45	10.49
Blacks			
Entry rate, 1971-72[a]	12.02	17.75	23.47
Exit rate, 1971-72[a]	11.46	10.70	9.94
Labor force participation rate, 1972[b]	60.53	63.11	65.69
Entrants/labor force, 1972[c]	7.43	10.29	12.83

a. In deriving these estimates, the other independent variables are fixed at their mean values, and the regression equations are used to predict the value of the entry and exit rates corresponding to the indicated unemployment rates.

b. If $\hat{e}_{7172}$ = the predicted entry rate between 1971 and 1972.

x_{7172} = the predicted exit rate between 1971 and 1972.

L_{71} = the number of women in the sample who were in the labor force during the 1971 survey week.

O_{71} = the number of women in the sample who were out of the labor force during the 1971 survey week.

$\hat{L}_{72}$ = the predicted number of women in the labor force in 1972.

P_{72} = the predicted labor force participation rate in 1972.

then

$$\hat{L}_{72} = L_{71} - \hat{x}_{7172} \cdot L_{71} + \hat{e}_{7172} \cdot O_{71}$$

Table 4 (Continued)

and

$$\hat{P}_{72} = L_{72}/(L_{71} + O_{71})$$

Note that estimates of L_{71} and O_{71} are based on the entire sample, not only on the cases for which no data on the explanatory variables is missing.

c. If $\hat{E}_{72}$ = the predicted number of new entrants in 1972

then

$$\hat{E}_{72}/\hat{L}_{72} = (\hat{e}_{7172} \cdot O_{71})/\hat{L}_{72}$$

CONCLUSIONS AND POLICY IMPLICATIONS

There are two major findings of this study. First, with respect to the net effect of the unemployment rate on the labor force participation of married women in the sample, it was found that the discouraged worker effect predominates among white women while the additional worker effect is dominant among black women. Second, among both blacks and whites, the unemployment rate had a much stronger impact on labor force entries than on labor force exits. 15/ This in turn implies that married women in this age group do not move in and out of the labor force as economic conditions change (Mincer, 1966). Rather, the cyclical sensitivity of labor force participation is due to the effect of economic conditions on the timing of labor force entry.

The implications of these findings for policy depend in part on the applicability of the results of this cross-sectional study for the labor supply behavior of married women in this age group over the business cycle. As noted earlier, the use of microdata (data on individuals) answers the criticisms made of cross-sectional studies based on aggregation problems. However, reasoning from cross-sectional to cyclical effects may still pose problems. Local unemployment rates tend to be relatively stable over time (Fleisher and Rhodes, 1976). Thus, the measured impact of the unemployment rate on entry and exit probabilities in a cross-sectional study would approximate the long-term effects. If, for example, there are considerable transaction costs involved in searching for a job and making alternative child care arrangements (Heckman and Willis, 1977), the response of women to short-term changes in the unemployment rate may be less than their response to long-term persistent differences. In addition, we have allowed a one-year period for the change in labor supply to take place. When the concern is with the cyclical sensitivity of labor supply, the relevant time interval is much shorter, on the order of one month. This consideration also leads us to

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15/ This finding is counter to that reported by Smith (1974).

expect that the cross section estimates would be greater than the actual cyclical responses. 16/

Nonetheless, it seems reasonable to consider the direction of the cross-sectional findings applicable to labor supply behavior over the business cycle. Thus, counter to some of the findings cited earlier, our results suggest that "hidden" unemployment is expected to be a significant problem for married white women in this age group. Unemployment statistics will tend to underestimate the job creation task ahead for this group. Delayed labor force entry during recessions means that women accumulate fewer years of labor force experience than they would have if economic conditions were better, with consequent negative effects on their subsequent wage rates and thus on efforts to reduce the male-female earnings gap.

The tendency of the additional worker effect to predominate among black women means that labor force entry is accelerated by recessionary economic conditions and that, other things equal, the entry rate will decline as economic conditions improve. To the extent that black women tend to be concentrated in particular occupations or industries, accelerated entry during recessions increases the competition for these jobs and thus worsens employment conditions in these sectors.

These hidden costs of recessions provide additional arguments in favor of vigorous efforts to maintain full employment at the national level. At the level of the local labor market, our results also suggest the need for policies that stimulate aggregate demand when unemployment is high.

16/ On the other hand, the sample includes individuals who changed their residences between 1971 and 1972. Such an opportunity to alter the labor market conditions one faces through intercity migration has no counterpart when the national economic situation is the relevant context. This consideration would reduce the magnitude of the upward bias discussed in the text (of the cross-sectional as compared to the time series responses), but most probably would not eliminate it. It was decided to include individuals who changed their residences over the period so as to eliminate any selectivity bias that would result from restricting the sample to those who did not attempt to alter their situation.

The finding that the unemployment rate operates primarily on entry probabilities suggests that the effect of economic conditions on the labor force participation rates of married women in this age group may decline over time. The secular trend toward rising labor force participation means that the relative size of the group outside the labor force will shrink. As the size of the group out of the labor force declines, shifts in entry probabilities will give rise to smaller changes in flows of entrants. Thus, labor force participation rates of this group of women may become less cyclically sensitive in the future.

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DISCUSSANT REMARKS

by

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The Blau paper places a substantial amount of emphasis on the differences in impact and related behavior between black and white women. But there are many problems that remain unresolved. The estimated relations have very low explanatory power and the F-statistics are decidedly puny (although they are "significant" except for black exit rates). All coefficients are allowed to be different between the two groups, but there is no argument, and certainly no evidence, supporting such wholesale disaggregation. It is possible to develop and test models that are more selective in the differences that are allowed, and such analysis would enable one to sort out the differences that are worth talking about.

It remains unclear what there is about "blackness" that leads to an opposite response to market unemployment rates. Ad hoc explanations are suggested and usually involve interaction with income or income change attributable to other household members. These are testable hypotheses and should be pursued. There may be some inherent or cultural differences that produce these results, but other alternatives ought to be investigated. A more general habit was developed of using color or race or ethnicity as a catch-all proxy variable, and then putting forth explanations that suggest relatively direct measures. This has gone on long enough, and by now we should be testing those direct relationships explicitly.

The analysis is essentially cross-sectional, using only one 12-month period for observing status transitions. Yet the longitudinal data would allow examination of the effects of intertemporal changes in unemployment rates. The inherent analytic potential of the NLS data for examining the question at hand is very slightly used. In brief, this paper has given us some indication that the NLS is a promising source for understanding the labor-supply response of women and has posed some questions for subsequent resolution.

The Fligstein-Wolf paper deals with what must be an embarrassment for all sociologists seeking to support the notion that our society has kept women from achieving equal status with men in the labor market. That notion seems nearly self-evident to many of us, and yet the analysis of occupational status, as captured by the scales commonly used by sociologists, does not confirm a disparity in the mobility processes by which such status is achieved.

The authors attempt to rescue the situation by attributing an occupational status for nonemployed women. While it is clear that more women are outside the labor force, it is problematic to propose an occupational status for them. Is it what would happen if all of them entered the labor force, is it only an extrapolation from those who are at the margin, or what? An innovative statistical model is used that is capable of correcting for "censorship," that is, the absence of some observations because of sample selection. But, if I understand correctly, the problem here is with undefined rather than unobserved variables. Even in the best of circumstances, the procedure is suited for removing bias in estimated relationships within the span of observation; it still requires strong assumptions to extrapolate well into the unobserved or "censored" region.

I strongly suspect that the problem lies in the construction of the scales themselves. Strong sex segregation in occupational categories allows for a sort of implicit normalization such that jobs that were "pretty good for a woman" tended to be given the same ratings as those that are "pretty good for a man," despite pay differentials and lack of equal measures of the other features such as authority or autonomy that characterize the "pretty good" job. This sort of normalization does not have to be built in by the scale makers; it could be the result of poll taking if the implicit comparison among sex-segregated occupations is usually within rather than between sex groups.

In any event, I sympathize with the embarrassment produced by the use of these scales to study sex inequalities and inequities, but must conclude that this effort at resolving the problem has not succeeded.

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DISCUSSANT REMARKS

by

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Francine Blau has used the 1971 and 1972 waves of the National Longitudinal Survey of mature women (aged 34 to 48 in 1971) to examine the impact of local unemployment rates on changes in their labor force participation between 1971 and 1972. Only women who were married in 1971 were included in the study.

Two major conclusions are drawn. The first is that for white women the impact of the local unemployment rate on labor force participation is negative, significant, and larger than the results obtained for time series. The author interprets this as a discouraged worker effect. For black women, labor force participation is found to be greater the higher the local unemployment rate. This is said to be an added worker effect. The second major conclusion is that these effects work almost entirely through the impact of unemployment on entry probabilities. The implication of the finding that exit probabilities are not significantly different across local labor markets with different unemployment rates is that married women in this age group do not move in and out of the labor force as economic conditions change.

Blau recognizes the problems associated with drawing inferences about behavior over time from cross-sectional evidence. However, she is not as cautious in her interpretation of the results of her cross-sectional analysis. Both the discouraged worker effect and the added worker effect describe reactions to changes in labor market conditions over time. Similarly, her statements about labor force withdrawal concern hypothesized responses to changing labor market conditions. A cross section, on the other hand, examines the behavior of individuals in different local labor markets at a point in time.

Take, for instance, the case of a depressed region, with chronic high unemployment and little cyclical change from one year to the next. (The period 1971-72 that she analyzed was not a period of rapid cyclical change for the economy as a whole, so that the situation in many local labor markets could have been relatively static.) In such a depressed area, the discouraged worker effect, if any, would have been operative throughout the period. In other words, had there been a discouraged worker effect, the level of labor force participation would have been lower in both 1971 and 1972 than it was in regions with lower unemployment. However, for those people in the labor market in 1971 (either at work or not previously discouraged), the exit probability would be relatively low. If jobs are scarce, people with jobs will tend to hold on to them, since they know reemployment opportunities may be limited. But this says nothing about the timing of exits in a cyclical downturn when people are being laid off. In a static but depressed labor market, exit probabilities are not likely to be higher than in a static, tight labor market. In fact, quit rates are likely to be lower when unemployment is high than they are in a tight labor market. But in a downturn when people are laid off and new employment opportunities are unavailable, discouragement is likely to show up in higher exit probabilities.

On the other hand, as Blau points out, it is not surprising that the cross-sectional study shows a higher impact of unemployment on entry probabilities than would a time series. Again, in a depressed local labor market where economic conditions are not undergoing much change, individuals have better labor market information than they do in an area where the job market is in a state of flux. Since job search is a way of obtaining labor market information, one would expect search activity to be less the more information is available. Further, adjustments relating to family responsibilities tend to be made more fully under static conditions than when conditions are changing.

The NLS data do provide some information about labor force status over time, and so the cross-sectional methodology is not necessarily a limitation of the NLS data, per se, but only of this study. A more serious problem is that unemployment and labor force status in general undergo many changes each year, particularly for women who move in and out of the labor force more frequently than men. In 1972, for instance, 36 percent of women aged 25 to 44 who were in the labor force at some time in the year also experienced a period out of the labor force in that year. This means that examining a woman's labor market status during a single week in 1971 compared with a single week in 1972 does not give a very reliable indication of whether she was in the labor force at some time in the year or for how long. A more continuous labor force history, such as that provided by the Work Experience Surveys or the gross flow data from the Current Population Survey, allows the analyst to get a much better handle on labor force status transition probabilities than do the snapshots obtained from the Blau study.

There is a section in the National Longitudinal Surveys that provides retrospective work-history data. It would be interesting to compare these retrospective declarations of labor force status with the CPS measures for a group with a similar demographic profile. However, if the retrospective Work Experience Survey is any indication, women tend to underreport unemployment and labor force participation rather substantially when they are asked to recall their labor market status over the previous year, relative to the Current Population Survey, where they report their labor market status in the previous week. 1/

Given these reservations, what can the National Longitudinal Surveys tell us about labor force participation? I think the most interesting line of inquiry to pursue with these data is to examine the impact of various status changes of the women themselves on their labor force participation. For instance, the impacts of changing marital status and number of preschool children on the labor force participation of white women were significant and of the expected sign in the Blau study. Further, the finding that a

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1/ See Richard D. Morgenstern and Nancy S. Barrett, "The Retrospective Bias in Unemployment Reporting by Sex, Race, and Age," Journal of the American Statistical Association LXIX (June 1974): 355-57.

marital split or a change in the number of preschool children did not significantly affect the labor force participation of black women suggests a possible work disincentive for persons eligible for AFDC.

Another status change that could have been analyzed is the impact of migration on labor force participation. Other studies have shown that when married women relocate geographically, it is often to further their husband's career objectives and it is generally to the detriment of their own labor market status.

Despite my objections, Blau's study has highlighted some interesting differences in the labor market behavior patterns of black and white women and the effects of changing family status on their participation rates. The NLS data provide a unique and valuable source of information on status changes of individuals and the effect of these status changes on their labor market behavior. But data from the NLS are less interesting as a source of information about short-run reactions to changes in labor market conditions. Data obtained from the Current Population Survey are far better suited for the latter purpose.

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V. PANEL DISCUSSION ON WHAT POLICYMAKERS NEED TO KNOW THAT RESEARCHERS CAN ADDRESS

INTRODUCTORY REMARKS

by

Carol H. Weiss
Center for the Social Sciences
Columbia University

In order to provide background for this panel discussion on what policy makers need to know, it might be well to start with a few words on how policy makers use research information. The past three or four years have seen the beginning of empirical research on knowledge use by government policy makers in the United States--the kinds of information they find useful, the kinds of information they use, and how they use the results of research. As we have moved in on this topic, it has become apparent that some traditional definitions of "research utilization" are much too simplistic to capture the complex and ambiguous processes of knowledge use in the making of policy.

The imagery that people have in mind when they talk about the use of research in policy making is usually a problem-solving model. A problem exists: decision makers are considering alternative ways of coping with the problem, but they lack essential items of information or insight; research is done and comes up with the missing evidence and conclusions; with the holes now plugged, decision makers proceed to arrive at an appropriate decision. In such a model of research use, research has clear and discernible effects on the direction of decision. Unfortunately, or at least unfortunately for the cause of simplicity, this kind of research use rarely occurs. When it does, it seems to happen on relatively low-level, trivial decisions. On the larger social issues with which government deals, the findings of a research study, or even of a body of research, do not often "solve" the multiple and complex questions that underlie the formulation of policy. Facts, data, findings, are susceptible to different interpretations and differential weighting, and they do not carry the day.

Policy making is not a scientifically rational enterprise. It is more concerned with reconciling conflicting interests and divergent value than with finding the course of "right reason." Although evidence is often needed to confirm or correct prevailing assumptions, it will rarely determine the outcome that is reached. It can clarify but it is unilkely to "solve" important social problems. In fact, major social problems are not solved; they are temporarily resolved as the shifting set of needs, pressures, values, interests, and knowledge come to equilibrium for interim periods.

Nor does the use of research in policy making seem to follow the traditional research and development model. That model, which is derived from the natural sciences, posits a phasing of activities that starts with basic research. Basic research comes up with results that suggest the possibility of important policy applications; this is followed by applied research and development to process the knowledge into a technology; application thereupon occurs. The assumption is that because knowledge exists, it presses toward application.

In the social sciences, it is hard to discern uses of research that follow such a sequence of events. Partly, this is so because social research rarely has sufficient power and authoritativeness to drive toward implementation. Partly, and more important, it is so because social policy requires a preexisting consensus both about the importance of the problem and about the parameters within which action is politically acceptable. Until consensus exists that a problem is serious enough to require government intervention and until the range of feasible alternatives has been delimited, the input of knowledge will have little resonance.

When one is dealing with social problems, the role of research in decision making is not direct and clear-cut, but that does not mean that it is nonexistent. What we have been finding is that on large societal issues, government decision makers are not resistant to research; they do not wall themselves off from it with the claim that they know better, nor do they always harvest it selectively to glean from it only what supports their preexisting positions. Such acts do occur, of course, and the use of research as ammunition in the political wars is not infrequent. But by and large, government decision makers are receptive to social research. They like to hear about research results and keep up-to-date with what social scientists have to contribute. They have shown themselves willing to support extensive research budgets. But the ways they use research tend to be conceptual rather than instrumental. They regard it as a source of understanding and insight into how the world works. It is another form of news. They "use" it to enlarge their awareness of conditions, to test their ideas, to help them order their priorities. Like other sources of idea and information--such as the media, history, direct experience, the grapevine, consultation, hearings, and the daily mail--it becomes a mode of enlightment.

Its effects are hard to trace. Decision makers are usually not aware of how research results affect their decision making process. But over time, over a range of studies, a set of generalizations emerges and becomes accepted, and this perspective shapes the way decision-makers look at issues and the parameters within which they deal with them. It is this kind of indirect, roundabout percolation of research information into the decision-making arena that probably constitutes the major impact of research on the course of government decisions.

A study that I have been doing for the past few years gives some insight into the standards that decision-makers use in screening which research studies to pay attention to. They are bombarded with information, and they have to apply some principles of selection. What I have been investigating are the criteria that they apply in practice when confronted with research studies. Our data are not based on the criteria that decision-makers say they use, but on the factors that actually emerge when they rate the usefulness of specific research studies in the context of their work. In our study, we located five factors that guide decision makers' screening of research studies for possible use.

The five criteria that decision makers apply for filtering research studies are these:

1. Relevance to the topics that they are currently dealing with. This is an obvious requirement and represents a first rough cut.

2. The quality of the research. Technical merit improves the usability of research. Many social scientists are skeptical about decision makers' allegiance to research quality, but we found

that it weighed heavily in their readiness to take research into account. What is at work here is probably less their commitment to the canons of science than their willingness to go out on a limb on the basis of inadequate research that can be discredited. The political arena is an adversarial arena, and evidence that it is vulnerable to attack by opponents is a liability. Therefore, technical quality becomes important.

3. Conformity to the knowledge and values of the user. Research is accepted more readily when it accords with what decision makers already know or what they believe they know and with their value orientations. This tendency has long been recognized in information use. People are more likely to find research useful when it fits within their existing framework of understanding.

4. The action orientation of the research. Research that provides clear and explicit direction for action tends to be more acceptable. If it shows decision makers feasible things to do within existing structures and programs, and if it implies courses of action that they have the authority to take, they are more likely to take it into account. The emphasis here is on the practicality of the conclusions.

5. Challenge to the status quo. The last factor is an unexpected one, and according to our data, it has important consequences. Decision makers are receptive to research that challenges existing organizational philosophies and activities. They rate research useful when it shows that present policies and programs are not working well and when the conclusions imply a need for fundamental reorientation of policy.

Note that this is not the same as research that challenges their own knowledge and assumptions; it is research that calls into question the way things are going on in government. Decision makers make a distinction between their own views and the current operations of their agencies, and at least in the fields and

> at the levels that we studied, there is little correlation between the two. Their responses to research indicate that they value, and are willing to listen to, research that suggests basic changes in government policy. Research that supports existing policy may be comforting and congenial, but it has a so-what quality. Research that implies alternative perspectives and new approaches to policy seems to provide more substantial fare.

The finding that challenge to policy and programming is a positive property of research reinforces the view that decision makers use social research as a source of concepts and ideas more than as a direct input to problem solving. Decision makers are hardly likely to rush out and implement far-reaching changes in policy. The fact that they judge challenging research to be useful suggests that they use research as a basis for stocktaking and conceptual orientation. In all events, their willingness to heed research whose implications are at major variance with current policy has an optimistic cast. There is an openness in the system to divergent perspectives and critical views.

With this introduction, let us get on to the panel discussion.

> Oh, East is East and West is West, and
> never the twain shall meet
> 'Till Earth and Sky stand presently at
> God's great Judgment Seat.
>
> Rudyard Kipling
>
> The Ballad of East and West

SOME POLICY RESEARCH ISSUES RELATING TO WOMEN'S EMPLOYMENT

by

Myra H. Strober
Stanford University

Unfortunately, as Professor John Dunlop and Senator William Proxmire are wont to remind us, Kipling's couplet all too often seems to apply to the relationship between labor market research and governmental policy. It is comforting to realize, therefore, that today, without even Gabriel's horn to prod us, we have set aside some time to examine several possible connections between the research and policy issues of women's employment.

I will confine my comments to three areas: (1) occupational choice; (2) equity in employment; and (3) some issues relating to the family and women's employment. I hope and trust that research and policy issues converge on numerous other questions regarding women's employment and that my discussion here is merely a sampling rather than an exhaustion of the interesting and important topics.

I must also dispel any notion that my comments represent a review of the literature on the areas examined. Time constraints simply do not permit a complete analysis of any of these topics. Finally, one last disclaimer. The issues I have chosen to discuss do not necessarily represent the most important policy questions or the most interesting research issues regarding women. What they do represent, I hope, is a set of issues that are important and at the same time researchable.

OCCUPATIONAL CHOICE

The persisting inequality of the distribution of men and women across occupations is by now well documented. 1/ And while the precise proportion of the female/male wage differential attributable to occupational segregation is less clear, there is general agreement that occupational segregation is responsible for some significant proportion of the sex difference in wages. Moreover, there is increasing policy concern about losses in both worker satisfaction and economic productivity in a system where occupational choice and/or outcome are heavily influenced by a highly sex sterotyped occupational structure. An important policy question, therefore, is, how can we assist men and women in making occupational choices based on their abilities without notions of the sex-appropriateness of these occupations unduly influencing their decisions?

Clifford Hawley and William Bielby, in their paper prepared for this conference, recommend that we do some further research, using the NLS data, on young men and women to examine the motivation of women to acquire higher education. I endorse their proposal and suggest that we go even further and analyze not only the determinants of the amount but also of the type of education obtained by young men and women. Despite some work on the career motivation of women who have chosen nontraditional occupations, 2/we still know very little about the occupational choice processes of young men and women. As a result, we know very little about how to maximize our chances for successful intervention in these processes.

1/ See Edward Gross, "Plus Ca Change...? The Sexual Structure of Occupations Over Time," Social Problems, 1968; and Council of Economic Advisors, Economic Report of the President, Washington, D.C. U.S. Government Printing Office, 1973.

2/ Helen S. Astin, The Woman Doctorate in America: Origins, Career and Family, New York: Russell Sage Foundation, 1969; Myra H. Strober, "Women Economists: Career Aspirations, Education, and Training," American Economic Review, (May 1975); Francine E. Gordon and Myra H. Strober, "Initial Observations on a Pioneer Cohort: 1974 Women M.B.A.'s," Sloan Management Review, (Winter 1978).

In a recent paper on career choice, Elisabth Allison and Pinney Allen provide a most interesting comparison of the career choice processes of women and men obtaining degrees in teaching, nursing, chemistry, and law. 3/ Their paper makes the important point that social scientists have tended to characterize the occupational choice processes of men and women quite differently. They note:

> Male occupational choice has been the province of economists, to be explained in terms of standard economic concepts--maximizing present value of lifetime income and responding to relative wage differentials. Female career choice has been the province of sociologists and psychologists to be explained in terms of fear of success and supportive role models.

Allison and Allen find, however, that the economic model works just as well (or just as badly) in explaining women's occupational choices as in explaining men's. The changes in supply to these four occupations with respect to the changes in salary in those occupations (lagged three years) are quite similar for the two sexes. But perhaps more important, for each sex in each of the four professions, the economic model explains rather little, only 25 percent, of the variance in the supply change. Clearly, for both men and women, the occupational choice process needs further study.

One promising statistical tool for looking at occupational choice using the NLS data is path analysis. Employing this methodology, Barbara Reagan and I attempted in a recent paper to explain sex differences in economists' choice of field specialization. 4/ We found that although

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3/ Elisabeth Allison and Pinney Allen, "Male-Female Professional: A Model of Career Choice," unpublished paper, (December 1976).

4/ Myra H. Strober and Barbara B. Reagan, "Sex Differences in Economists' Fields of Specialization," Signs: Journal of Women in Culture and Society (Spring 1976), Supplement.

much of the variance in field specialization remained unemplained, path analysis was nonetheless useful in highlighting critical decision points along the career choice path. We also found that although path analysis was useful for both sexes, the critical points along men's decision paths were somewhat different from those along women's paths.

The NLS data on young men and women are, of course, well suited for analyzing career choice. But the data on the older cohorts, particularly mature women, should not be overlooked. Women who return to work after several years out of the labor force frequently must remake their career choices. This is particularly true for women whose former careers, especially teaching, no longer provide job opportunities. With the addition of several questions in future interview schedules, much could be learned about the career choices women make (or are forced to make) upon returning to the labor force. Detailed questions about the job search process at this stage of life and its interaction with job choice should also yield important answers about the possibilities for breaking down occupational segregation. To the extent that so-called re-entry women are less concerned about what Jean Lipman-Bluman has termed "sexual brownie points" and more concerned, especially in the case of divorced women, with income, the possibilities for educating these women about less stereotypically female occupations should be carefully studied.

EQUITY IN EMPLOYMENT

One of the key policy questions in the employment field today concerns equity: How can public and employer policy best help to achieve job and salary equity for women at the workplace? There are obviously several research methodologies for getting at this question. For example, it would be possible, using institutions as the unit of analysis, to develop some criteria for measuring equity and then after examining various types of institutional programs, to make some judgments about which types are likely to be "successful." It also would be possible, and this research strategy is more interesting with regard to the NLS data, to use the individual as the unit of analysis and to compare the job and career paths of men and women. It would be particularly fruitful to use the younger NLS cohorts for such an analysis.

To do this type of research, the survey would have to include considerably more detailed job questions for both men and women. Job search processes, job characteristics (including career ladders, salaries, and supervisory responsibilities), job mobility (including promotions and transfers refused as well as accepted), and salient employer characteristics would all need to be probed meticulously. But such research would appear particularly fruitful in more clearly delineating the personal and organizational barriers and facilitators of increased equity for the two sexes. One particularly interesting research issue with important policy implications would be to carefully examine the role of part-time employment in career patterns.

That job and career patterns for women are changing has been widely asserted. Learning something about how these patterns have changed, and how they now compare to male patterns, may well promote some improvement in the design and implementation of policies to facilitate job market equity between the sexes.

THE FAMILY AND WOMEN'S EMPLOYMENT

Numerous policy questions attend the issue of the family and women's employment. And, as in the cases of occupational choice and employment equity, many of these questions could be considerably illuminated by a modest expansion and redesign of questions on the National Longitudinal Surveys. I will discuss two research issues with regard to the family.

Perhaps the most critical policy issue in the area of the family and women's employment concerns the care of the children of working mothers. What kinds of child care do working parents desire? What should be the role of the federal and local governments in providing such care? What should be the role of employers, schools, and communities? To what extent is the absence of affordable child care a barrier to women's employment?

Although Richard Shortlidge has provided some important analyses of the child care data already contained in the NLS,5/ more useful information on the demand for child care will not be attainable until the NLS questions are revised to include a precise description of the kind of care women are being asked to evaluate. The location, hours, control, educational component, and sick care services associated with a child care arrangement need to be spelled out. Moreover, the present NLS appears to measure demand only at zero price. We would obtain far more useful information if families indicated how many hours of a well-described type of care they would purchase at a particular nonzero price. By blocking the sample into three or four groups and specifying a different nonzero price for each group, it then would be possible to generate a demand curve for child care and to estimate the price elasticity of hours demanded. 6/ It would also be useful to use the NLS to estimate the demand for chid care "packages" (for example, for center care for part of the day and family day care or home care for the remainder of the day), as such combinations may be less expensive to provide per unit of quality than is full-day center care. 7/

A second important policy issue with regard to the family, concerns the differences in consumption and savings patterns between working-wife (w-w) and non-working wife (n-w-w) families. Holding total income and life cycle stage constant, are w-w families more or less likely to purchase than are their n-w-w counterparts: consumer durables? life insurance? college education? or vacations? Are w-w families more likely than n-w-w families to spend their income on employment-creating goods and services? Are there differences in savings

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5/ Richard Shortlidge, "Patterns of Child Care Utilization Among Women with Preschool Children," in Herbert S. Parnes et al. (ed.), Dual Careers, vol. IV, (December 1975).

6/ William F. Perron and I are currently using this method to estimate the demand for child care among members of the Stanford University community.

7/ I have discussed some benefits of care "packages" in Myra H. Strober, "Formal Extrafamily Childcare: Some Economic Observations," Cynthia Lloyd (ed.), Sex, Discrimination and the Division of Labor, New York, Columbia University Press, 1975.

patterns among the two types of families that are likely to affect long-term growth rates? Although Lucy Mallan, Charles Weinberg, Frank Stafford, Greg Duncan, and I have addressed some of these questions in several papers,8/ there is considerably more work to be done on these matters. The NLS represents an excellent data source for answering some of these questions. But again, several additional items would have to be added to the Survey. For example, although questions are asked about family purchases of several consumer durables during the past year, no information is requested regarding the existing stock of such durables (including age of stock), or whether the family purchased a new or used home during the past year. Yet, based on existing research, both of these are likely to influence the purchase of new durables. In addition, information on net changes in family savings and residential purchases would be particularly desirable to obtain.

CONCLUSION

In summary, I have suggested four research questions, that I regard as having important policy implications. In each case, with some additions to the questions asked by the NLS, the panel data being collected could add significantly to our knowledge about women's employment and could provided needed information for the framing and implementation of public policy.

First, an understanding of the determinants of career choice would assist enormously in our efforts to lessen occupational segregation. Second, a more thorough

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8/ See Lucy Mallan, "Financial Patterns in Households with Working Wives," unpublished Ph.D. dissertation, Northwestern University, 1968; Myra H. Strober, "Wives' Labor Force Behavior and Family Consumption Patterns," American Economic Review, (February 1977); Myra H. Strober and Charles B. Weinberg, "Wives' Employment and Family Consumption Patterns," Journal of Consumer Research, (December 1977); Frank Stafford and Greg Duncan, "Time Use and Technology in Households," unpublished paper, 1977.

understanding of men's and women's career patterns, including barriers and facilitators of job and salary equity betwen the sexes, would enable us to more intelligently design and implement public policy to achieve occupation and salary equity in the job market. Third, the NLS data could be used to answer questions about the demand for child care--demand understood in the usual economists' context--thus enlightening the public policy debate of issues of child care financing and design. Finally, I have suggested that NLS data could be used to increase our understanding of the influence of wives' employment on family consumption, thus providing important information for macroeconomic policy forecasts and planning.

There is a danger, of course, when suggesting new research areas that we will overburden the NLS. These Surveys clearly can't provide us with everything we'd like to know about all things. And, obviously, those who have worked with the Surveys more closely than I have will need to decide if the "few" questions I've added here and there add up to far too many questions in total. But, it appears to me that in the past these data have been underutilized. With some additions to the questionnaires the data could, in my view, serve to illuminate some extremely relevant policy issue.

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PRIORITIES AS VIEWED FROM A FEDERAL AGENCY

by

Mary Hilton*
Women's Bureau
U.S. Department of Labor

The Women's Bureau has throughout its 58 years of existence recognized the importance of research. In the early days, the Bureau undertook what in retrospect looks like simple research but what for that time was forward looking and innovative. Today we analyze data and look to others for basic research. I am pleased that the Women's Bureau had a hand in the inclusion of women in the National Longitudinal Surveys and in recommending some of the areas that were explored. It is gratifying to witness the development of new types of statistical information and increasingly sophisticated research directed toward questions concerning women and their participation in the labor force. We particularly welcome this conference and will carefully study the papers and the policy implications suggested.

The Women's Bureau is concerned with a wide variety of issues today, including problems and needs of mature women. In many ways women face unique life style adjustments in this period of transition in sex roles. The more thought--the more research--that is addressed to them, the better the chances of developing intelligent policies and programs to meet their needs.

To give you an interesting example, concerned women have been able to give widespread visibility to a subgroup of mature women whom they designate as displaced homemakers--women who have very serious problems. These are women who devoted many years of their adult lives to homemaking; have (or believe they have) few or no marketable skills; and suddenly find themselves widowed, divorced, or abandoned and ineligible for either Social Security benefits or welfare. They have an immediate need for job training and employment and other kinds of help to overcome disadvantages, including vulnerability on the basis of age, when entering the labor force. More information is necessary on the number and characteristics of women in this category and to consider how best to develop programs and policies to assist them.

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* Substituting for Alexis Herman, Director of Women's Bureau.

Other mature women re-entering the labor force need good occupational information and counseling concerning realistic choices. Educational institutions and training programs need research-based projections concerning the most appropriate course and vocational counseling offerings for the surge of older women students.

The problems of women business owners and self-employed women are just beginning to receive the attention of policymakers; more research should be done in areas related to the barriers these women face and the effect of federal programs and practices.

We don't know enough about mature women in rural America. Policymakers now have very little data on rural women in general or their employment needs.

These are only a few illustrations. There is great need for sensitive, careful policy and program-oriented research which takes into account the changing role of women and of men in our society. It is encouraging to see that this is at long last receiving increasing attention.

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A LEGISLATIVE PERSPECTIVE

by

Sharon W. Howe
Office of U.S. Representative Yvonne Burke

The displaced homemaker bill presented to Congress by Mrs. Burke would provide employment counseling, training, and placement services for this group of women. Displaced homemakers are defined as women 40 and older who must enter the job market, generally for the first time, because of divorce, widowhood, or the loss of husband's income.

Displaced homemakers came to our attention recently because of their growing numbers. Today, nearly 1 out of 3 marriages ends in divorce, yet only 14 percent of divorced women receive alimony awards, and less than half of that number, or barely 7 percent, receive alimony payments on a regular basis. Presently, there are four times as many widows as widowers. The life expectancy for women is 75 years, compared to 67 years for men. Thus, the painful reality is that the older women become, the more likely it is that they will be forced to become independent.

While our society has developed a number of income security programs designed to help people, the displaced homemaker is frequently ineligible for these programs. She doesn't qualify for unemployment compensation benefits; she generally is too young for Social Security; she is ineligible for most types of welfare; she frequently has lost her rights as a beneficiary under her husband's pension and health plans.

Without income, she must turn to the job market. The middle-aged women who has spent her adult life in the home finds it extremely difficult to make the transition from dependence to independence. In a youth-dominated culture, her lack of recent paid work experience, combined with her age, sex, and race, makes chances of employment dim.

The statistical data on displaced homemakers as a group are almost nonexistent and generalized. According to the U.S. Bureau of the Census, in March 1976, there were 3,162,000 widows between the ages of 35 and 64. There were also 2.435,000 divorced women, one-fourth of whom were divorced after 15 years of marriage. There is also a sizable number of potential displaced homemakers: 15 million women are not in the labor force who now have minor children and who will be without income security benefits when their children reach age 18.

The bottom line is that we have a very real lack of information on these women, and I call this example to your attention as an area of research that is critically needed by our nation's policymakers.

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THE VIEW FROM THE WHITE HOUSE

by

Margaret McKenna
Deputy Counsel to the President,
The White House

The White House does not have a pure research arm. Most information is filtered through agencies and departments before it reaches the President, and it is to be hoped that the research has been injected into the recommendations at those levels.

President Carter, however, asks many detailed questions--which suggests that there is sometimes a need for more specific data. Generally, policymakers need information in emergency situations and this doesn't allow for the reflection that researchers require. But, the researcher who knows what policymakers are thinking and asking can be tremendously helpful and influential; the difficulty is in knowing what is needed and where. Formal and informal channels exist for getting information to policymakers and they should be used. When by chance a brief, to-the-point, policy-oriented summary of research appears on my desk relevant to an area I'm concerned with, it gets attention and it gets used.

There are many issues before the White House now that could use research input:

1. One-third of all federal judges will be appointed in 1978. How can they be found? Research is needed on the viability of alternative recruitment processes.

2. Equal Rights Amendment--what are the spillover effects?

3. Equal opportunity legislation--how does one deal with covert discrimination?

4. International Women's Year--recommendations are coming up for consideration, and their implications must be evaluated in practical terms.

In sum, issues are reaching decision points, and there is a need for pertinent policy-oriented research focused on them.

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HOW CAN RESEARCH ON LABOR MARKETS BE USEFUL TO POLICY MAKERS?

by

Frank P. Stafford
University of Michigan,
Ann Arbor

In what ways can labor market research on women contribute to policy decisions, and what are the mechanisms by which research findings end up on the desks and in the discussions and legislation of policy makers? It appears to me that the impact of some kinds of research is substantial and direct and that the impact of other kinds of research is substantial and indirect. Of course some research has no impact on anyone, but part of this is explained by the trial and error nature of the discovery process.

Research with a substantial and direct impact tends to emphasize useful descriptive statistics. While in some quarters this form of research is viewed as plodding, it need not be so. Social science is based on observation, and it takes a good theorist to be able to identify truly unusual features of descriptive statistics. Without a theory there are no a priori expectations; if "anything can happen," nothing should be surprising, and the analysis wallows in a sea of tedious and incoherent numbers.

From a variety of theoretical perspectives, as well as from numerous policy-information needs, it is extremely useful to have probability sample, disaggregated, descriptive statistics on participation trends and wage rate trends. Further, comparative statistics for other countries are often useful. To illustrate, we have very rich data on participation rates of women disaggregated by marital status, age, and other characteristics. From these data we can see increases in participation, and we are often likely to attribute at least some of this change to change in family income and wages of women. Other industralized countries, however, notably Japan, appear to have experienced changes different from those for white women in the United States. Participation rates for women, particularly younger women, have declined in Japan. Can the differences between countries, or for that matter between black and white women in the United States, be explained by a rather simple labor supply theory, or is a more complete family-decision-making model necessary? Here the data for describing the labor market may also raise new research questions that may require a modification or broadening of the existing conceptual models of labor supply.

In some very basic areas we are short of facts. What has happened to the male-female wage differentials in the last 10 to 15 years? After canvassing some of my colleagues on this question, I conclude that we do not know much about it. Yet it seems to be a basic factual matter that should be treated carefully and should be available in some accessible form. To my knowledge we have only one published paper on this subject--by Victor Fuchs--and a working paper by John McNeil and Douglas Sater. 1/

At a descriptive level we have relatively little data on child care time of married women. From some recent time diary studies, however, it appears that child care time is now achieved at the expense of a smaller reduction in labor market time than was true 10 to 15 years ago. These data also show that child care time is "financed" out of reduced sleep and passive leisure, particularly for women who attended college. 2/

1/Victor R. Fuchs, "Recent Trends and Long-Run Prospects for Female Earnings," American Economic Review, (May 1974), pp. 236-42. His evidence suggests larger relative gains for the more educated women and a slight or small improvement in relative wage rates of women between 1959 and 1969. The McNeil-Sater paper is "Recent Changes in Female to Male Earnings Ratios," presented at the annual meetings of the Population Association of America, Seattle, April 1975. They report a stable female-male ratio of .52 in 1969 as well as in 1959.

2/C. Russell Hill and Frank P. Stafford, "Parental Care of Children: Time Diary Estimates of Quantity, Predictability, and Variety," working paper, Department of Economics and Institute for Social Research, University of Michigan, 1977.

Further, there have been some minor changes in time uses within the household, with married men spending more time in housework than they did 10 years ago and married women spending less time in housework than they did 10 years ago. [3]

One major area in which data for analysis are seriously lacking is at the level of the establishment. It contrast to the rich information about individuals and families, which have permitted far better analysis of participation, child care, fertility, and other aspects of labor supply, we have very incomplete information on labor demand. How are responsibilities assigned at work? How does the type of technology--assembly line, office, hospital--affect the assignment of work to different individuals and the firm's hiring, promotion, and layoff policies? The organization of work may be very important for individual productivity. In any event, the productivity at a given work site is not just the sum of individual productivities, but will depend on the organization of work, scheduling or breaks, overtime policy, and other resource allocation rules inside the firm.

Is a sample of establishments necessarily hard to get? I think the following research design is worth pursuing. To begin, draw a sample of nonresidential structures. After all, since we attempt probability sample of individuals via samples of housing structures, we should be able to sample work organizations by sampling commercial structures. This would get around the problem of compiling an exhaustive list of organizations, which would have the obvious problem that many organizations are transient and thus each year many go out of existence. They are often replaced by a new firm in the same building space.

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[3] Frank Stafford and Greg Duncan, "The Use of Time and Technology in the United States," working paper, Department of Economics and Institute for Social Research, University of Michigan, 1977, p. 37. Married men are spending about 1.5 hours more a week in housework and married women are spending about 1.5 hours less.

From the establishment a number of organizational variables could be ascertained number of employees, industry, hiring policy, pension coverage, unemployment insurance claims, technology, use of shifts. For these establishments, personal interviews could be conducted with individuals. I believe the resulting data base could be made representative of both firms and workers if care were taken in drawing the original sample frame. Such a data base would fill a need for joint information on workers and their employers.

If one has a good data base that provides useful descriptive statistics for researchers and policy makers, another use of the data is to identify the size of the target populations affected by contemplated policy changes. The current Survey of Income and Program Participants of HEW is designed explicitly for this purpose. However, the NLS data could be used for such purposes.

In addition to knowing the approximate size of target populations, it is usually important to have some idea of the behavioral response of the target group to the variables affected by the policy. Here the researcher is given a tougher assignment.

The assignment is that of providing good quantitative estimates of behavioral responses. An example of this is the attempts to estimate labor supply responses to various welfare reforms, such as food stamp changes, larger or smaller guarantees in welfare programs, or wage subsidies.

In other areas, research or labor market behavior need not be directly intended for policy research. In my opinion, excessive concern for policy implications may prevent the analyst from developing a coherent and fairly broad framework that could be applicable in a variety of circumstances. The study of income change that motivated the Panel Study on Income Dynamics of the University of Michigan was not designed with a given policy objective in mind. However, the major empirical finding, that there is great turnover in the poverty population from year to year, has important policy implications for the design of income support systems. It implies that short-term income support systems such as unemployment insurance or negative income taxes should be given more weight. The study also shows that many of the short-run changes in well-being are the consequences of changes in household composition and labor force participation of the members of the household. In turn, this leads to questions about the factors that contribute to stability or change in family composition.

If a great deal of poverty is associated with marital instability, it suggests that additional research on marriage, divorce, and fertility could add greatly to our understanding of poverty and to different roles for public policy. To be consistent with my view, I will not attempt to identify more precisely what these might be, but will argue that a well-developed theory of family change with supporting empirical evidence would very likely have important policy implications.

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APPENDICES

THE SECRETARY OF LABOR'S INVITATIONAL CONFERENCE
ON
THE NATIONAL LONGITUDINAL SURVEYS OF MATURE WOMEN

January 26, 1978

Department of Labor
200 Constitution Avenue, N. W.

9:00 Welcoming Remarks from Eli Ginzberg, Chairman of the National Commission for Manpower Policy

9:10 Keynote Address by Secretary Ray Marshall

9:45 Setting the Stage: What Have We Already Learned from the National Longitudinal Survey?

Moderator: Herbert S. Parnes

Papers: "The National Longitudinal Survey Mature Women's Cohort: A Socioeconomic Overview,"
Frank L. Mott

"Research Uses of the National Longitudinal Survey Data on Mature Women,"
Clifford B. Hawley and William T. Bielby

Discussants: Andrew I. Kohen
Carol L. Jusenius

11:10-11:30 Coffee Break

11:30 Work and Family Roles: Conflicts and Resolutions

Moderator: Barbara A. Jones

Papers: "Sex Role Attitudes and Employment Among Women: Dynamic Models of Continuity and Change,"
Anne Statham Macke, Paula M. Hudis, and Don Larrick

"Employment, Income, and Family Life: The Case of Marital Dissolution,"
Andrew Cherlin

"Economic Consequences of Marital Disruption,"
Lois B. Shaw

Discussants: Linda J. Waite
Clair Vickery

1:00-2:30	Lunch
2:30	How Women Fare in the Labor Market Moderator: Glen Cain Papers: "The Impact of the Unemployment Rate on Labor Force Entries and Exits," Francine D. Blau "How Can We Explain the Apparent Sex Similarities in Occupational Status Attainment?," Neil Fligstein and Wendy Wolf Discussants: Harold W. Watts and Nancy Smith Barrett
3:30	Panel Discussion on What Policymakers Need to Know that Research Can Address Moderator: Carol H. Weiss Panel Members: Mary Hilton, substituting for Alexis Herman Margaret A. McKenna Myra H. Strober Frank P. Stafford Sharon M. Howe
4:30	Summary by Isabel Sawhill
5:00	Conference adjourns

PARTICIPANTS IN THE SECRETARY OF LABOR'S INVITATIONAL CONFERENCE ON THE NATIONAL LONGITUDINAL SURVEYS OF MATURE WOMEN

January 26, 1978

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Francine Blau
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PARTICIPANTS IN THE SECRETARY OF LABOR's INVITATIONAL CONFERENCE ON THE NATIONAL LONGITUDINAL SURVEYS OF MATURE WOMEN

January 26, 1978

(Continued)

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Carol Weiss
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Wendy Wolf
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ATTENDEES AT THE SECRETARY OF LABOR'S INVITATIONAL CONFERENCE ON THE NATIONAL LONGITUDINAL SURVEYS OF MATURE WOMEN

January 26, 1978

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- An Interim Report to the Congress of the National Commission for Manpower Policy: *The Challenge of Rising Unemployment,* Report No. 1, February 1975.
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- *From School to Work: Improving the Transition,* Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, August 1976. Stock No. 040-000-00364-9. Price $3.00.
- *Employability, Employment and Income: A Reassessment of Manpower Policy*, Olympus Publishing Company, Salt Lake City, Utah 84105, September 1976.
- *Jobs for Americans,* Prentice Hall, Inc. Englewood Cliffs, New Jersey 07632, October 1976.